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ANTISEPTIC SURGERY.[1]

A Lecture Complimentary to the Lane Course of Medical Lectures, delivered at Cooper Medical College September 15, 1896.

By WILLIAM MACEWEN, Regius Professor of Surgery in the University of Glasgow, Scotland.

Gentlemen: In giving these afternoon lectures, it will be understood that they are to be of a quite informal nature. I do not wish to go into a systematic description of antiseptic surgery, or even of aseptic surgery; but perhaps it might interest many of those who are here if I tell you one or two points with regard to the earlier efforts of introduction of antiseptic surgery.

I remember, as a student, Professor Lister describing Pasteur's experiments on fermentation. Pasteur had described how it was that fermentation proceeded and was due to certain germs, and he also expressed the belief that many of the processes we had to deal with in nature were due to those same germs. Lister deduced from these observations that the suppurative process which occurred so abundantly in wounds at that time was probably due to some form of germ or to a fermentative process. It is quite true that prior to Lister's publications there was a French surgeon, Lemaire, who had deduced in the same way as Mr. Lister did from the experiments of Pasteur, that suppuration was probably the result of germs; and Lemaire further advised the use of phenic acid for the purpose of destroying this so-called "fermentation" in wounds. However, Lemaire did not go further, and Lister, quite independently, and without the knowledge that Lemaire had written on that subject, pursued the same course with regard to the deductions from Pasteur's observations, and also advised that carbolic acid should be used for the purpose of preventing suppuration. He had not the advantage that we now have of being able to discover the particular germs which caused suppuration. It was purely a deduction on his part, founded on Pasteur's observations. Lister first tried carbolic acid as an antiseptic and first mixed the carbolic acid with blood-clot as a vehicle, and I remember his delight at finding that the blood-clot was preserved from decomposition and retained a considerable amount of the carbolic acid. Soon after it was found inconvenient to get blood from the slaughter-house; other substances were tried as a vehicle for the carbolic acid. There was something very much like whiting used for a time, then lac plaster, and subsequently gauze. These dressings were moistened with carbolic acid just before being put on the wound. Lister's idea was to destroy by chemical action atmospheric germs, which it was feared might come in contact with the wounded surfaces.

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[1] By special permission of Dr. Macewen and from manuscript revised by the lecturer.

There is no doubt that the antiseptic mode of treatment of wounds revolutionized surgery. You cannot remember, but I do, as a student, the terrible ravages which used to be wrought by pyemia and by septicemia in wounds. We had in the Royal Infirmary in Glasgow in those early days repeated epidemics of pyemia. Our wards at times used to reek with it. Case after case became affected with rigors and profuse perspirations, and frequently we had our wards shut and whitewashed and rubbed over with chloride of lime and many other chemical disinfectants, but until the antiseptic treatment came we had no efficient means of preventing this pyemia from occurring. We had then a very excellent demonstration, as in the wards of some surgeons pyemia still continued, but in the wards of Lister it had gone. Like everything new, the method was assailed by a great many critics. It is good that we have criticism, provided it is carried on in a legitimate way. There were many who said that talking of germs in the air was a phantasy—what absurdity! nobody ever saw those germs; and it was merely a piece of quackery to talk of a special kind of material that could be applied to wounds to prevent "inflammation." I need not weary you with the details and the carping criticisms of that period. It is a curious fact that in the land of Pasteur antiseptic surgery, in the Listerian sense, has only lately begun to be appreciated. The Germans adopted the antiseptic treatment at a very much earlier period than the French, and have since carried it to great success.

In the evolution of any system progress is made step by step. At one period Mr. Lister tried to prevent the germs in the atmosphere from getting into wounds by surrounding them by a cloud of carbolized spray. No doubt the very vortex which the rushing steam produced might carry from the air a number of germs which might be deposited upon the wounds. However, the amount of antiseptic material introduced into the wounded surface was quite sufficient in itself to destroy those organisms, and we had very beautiful and almost perfect results from antiseptic surgery.

Nowadays, we have an evolution from antiseptic surgery, namely aseptic surgery. Lister always admitted that the healthy living tissue had the power of preventing a certain number of the germs from acting, but he does not quite approve of aseptic surgery as a matter of practice. He has given a warning against the introduction of this new development—this aseptic surgery. To an extent I sympathize with his line of argument. I do think that aseptic surgery requires to be carried out with a multiplicity of detail which is sometimes difficult of practice, especially if one is operating at a considerable distance from such centers as this is, where one can have every appliance for the treatment of wounds. On the other hand there are many reasons why we should go in the direction of aseptic surgery. In the first place, we believe that the living, healthy tissue has a wonderful power in destroying germs, provided we do not interfere with the vitality of the tissues. If we interfere with the vitality of the tissue, then we predispose that tissue to inflammatory action caused by germ growth. If we introduce into the tissue a foreign body, a dead substance, then at once we afford pabulum for the growth of germs. If we introduce a single germ of tetanus into the living healthy tissue, I have no doubt that that living healthy tissue would make short work of the tetanus germ. But if we introduce this tetanus germ in the midst of a blood-clot or a pocket full of serum in such a position as to prevent the vital tissues from coming into personal contact with the germ, then we afford that germ the opportunity of developing in this rich material, kept at the proper temperature; and once it has multiplied to a certain extent, the germs and their toxines may be so abundant as to produce a distinct effect upon the neighboring tissues and permit them to get into the circulation and cause very serious results.

Now, it is absolutely necessary in carrying out aseptic surgery to prevent germs from entering the wound. We would prevent absolutely one germ, if we could, from entering the wound; but we also must believe that the healthy living tissue, as long as it remains in that condition, has the power of destroying a certain number of these germs. You see that very beautifully illustrated in the experiments which Metschnikoff has performed on the lower forms of life. He shows you certain amebæ that have the power of englobing a certain number of the lower forms of life and digesting these in their interior. Long before Metschnikoff had written on that subject I had the opportunity of observing the same process—in a sense, phagocytosis occurring in the absorption of catgut and of chicken-bone drainage tubes. We introduced, experimentally, into the interior of wounds on the lower animals drainage tubes and catgut for the purpose of demonstrating their utility and also the power of the tissues in absorbing them, and we had the opportunity of seeing in the microscopical examinations of the tissues afterwards that minute portions of those drainage tubes or catgut were picked up by the leucocytes, and the leucocytes carried their burdens away to parts at a considerable distance from the original focus. One noticed that the drainage tube of chicken-bone became hollow and thin and eroded, and the whole tube was surrounded by swarms of leucocytes, and one could see, both in the leucocytes which were near to the part and in those at a distance from it, a considerable number of those leucocytes filled with the particles of catgut or of drainage tube which they had picked up. That of course was the phagocytic action. The very same thing occurs with those leucocytes in the presence of germs. You will find in the animal tissue that once a certain number of germs gain access to the tissue, an extravasation of leucocytes occurs which absorbs those germs. Whether the victory will go in one direction or the other depends on the number of the germs and the nature of the weapons they bring with them in the shape of toxines on the one hand and the number and vitality of the leucocytes on the other. If the vitality of the tissue is sufficient, the leucocytes will be the victors. They will carry away those germs, broken and destroyed, and dispose of them. If, on the other hand, the vitality of the tissue has been lowered and the vitality of the leucocytes has been interfered with, then the germs, probably, will be the victors. All who practise aseptic surgery require to keep that point in mind.

Now you will see what we want in practice. If we take a chemical substance, and put it into the living tissue and thereby destroy or lessen the vitality of that living tissue, then any germ which may happen to be present and which may not be acted upon by this antiseptic will have the power, in the presence of this lowered vitality of the tissue, of establishing its position. If we can prevent the tissues from being lowered in their vitality, then we help greatly the power of those tissues in overcoming the enemy; and for that very reason we do not introduce chemicals into the interior of wounds. We no longer wish to practise antiseptic surgery, but we wish to practise aseptic surgery. Prevention is better than cure. We have learned, however, that pathogenic organisms are rarely found in the atmosphere except under special circumstances. No doubt in hospitals where a considerable amount of suppuration occurs, it is quite possible that there may be germs in the atmosphere, especially if the surroundings are not what they ought to be, and more especially if there is any carelessness with regard to the treatment of discharges. But take it in a broad way, we do not so much fear the germs in the atmosphere as we used to. We have come to know that the germs we have most to fear are those which may be brought in contact with the wound. We may bring them to the wound by our hands or our instruments, or our clothing. Of course, the patient also may do so in the handling of a part (if he be permitted to do so), or in his clothing he may carry a very considerable number of germs. Clothing, unless it is very frequently renewed, is very apt to be filled with germs. Underclothing, stockings and boots, contain multitudes of germs You know that a gardener, cultivating certain varieties of fruits, places considerable value upon an old boot. He does not know why, but he finds that old boots and old stockings, especially those that have been long worn, make very excellent material for forcing certain kinds of plants. They do so because they are filled with germs that have an action upon the earthy material with which they come in contact in the soil, breaking it up in such a way as will permit the salts to be absorbed by the plants with greater rapidity. Clothing must be paid very great attention to in surgery, and therefore we take means of preventing the clothing, or the germs that may be in them, from coming in contact with the part about to be operated on. We also know that the skin, the normal skin, is filled with certain forms of germs. If you take a person who only has a bath once a month or so, you will find in any part of his skin abundance of organisms. I have no doubt if you made a scraping from the skin of such a person, and a culture of that scraping, you would find streptococci and staphylococci in abundance, and the longer he defers this cleansing process, the greater will be the number of germs contained in the cutaneous coverings of his body. Those germs are innocuous as long as they remain on an unbroken surface. They may dip down into the sebaceous glands; they may penetrate to a considerable distance into the prolongations of the skin, but they will not there produce mischief unless there is some opening which permits them to act on the tissues underneath. There are some persons whose skins are covered with boils, and you have in those boils both staphylococci and streptococci. Those very boils contain pathogenic organisms which, if introduced into a wound, would set up violent inflammation. We therefore require to be extremely careful with the skin; and therefore, before a patient is operated upon we require to prepare the skin in such a manner that we would eradicate from it those germs which are very apt to produce such mischief.

Besides those virulent pyogenic organisms which I have mentioned, there is one which is described as being very much milder in its action. I have a doubt whether one can establish the identity of this special mild kind of germ. But whether that be so or not, we know that in the skin there are a certain number of virulent organisms ready to act the moment a breach of surface has been made. For that reason, we require to prepare the skin of the patient very carefully. There are many ways of doing that. I presume that everybody would consent to the application of soap and water to the part. Many surgeons think that all that is necessary is to apply for an hour before the operation a dressing with a 1:20 carbolized solution. I think that that would go a great way toward preparing the skin, but it is not sufficient, and therefore in my practice, we first of all use potash soap and hot water, and we also use a scrubbing brush, and we believe that we can remove a great many of those organisms by friction, by the firm rubbing of the part. After we do that, after the surface appears to be as clean as it is possible to make it, we take turpentine and rub it all over the part, to remove the greasy substance, cleanse the part thoroughly and dry it, and then apply methylated spirits (spirits of wine or alcohol will do quite as well, though it costs a little more), and allow it to soak into the part for a few minutes; it evaporates from the surface in a short time. Then we put on a watery solution of carbolic acid, 1:40. We apply that in the shape of a water dressing which surrounds the part. We repeat this process night and morning until we find that all the loose skin has been untirely removed. You will find that little whitish particles form when you rub the skin, which must be removed. We repeat that process night and morning until all those particles are removed. There are many who use for this purpose antiseptics other than carbolic acid. Bichloride is much used, and there are many others. I would in the abstract admit the possibility of being able to clean a part so thoroughly with soap and water by friction that we might not require the use of any of those chemicals. But we do know that the prolongations of the skin in many parts of the body penetrate to a considerable distance, beyond that which we can easily reach by this scrubbing brush. I have no doubt that we remove the greater number of germs by the friction method, but we like also to apply an antiseptic for the purpose of reaching those deeper parts. Bichloride does not do that well. It has not the power of penetrating to the extent that carbolic acid has. When we apply carbolic acid in a water dressing we find that in a comparatively short time that carbolic acid has passed through the system;

we can detect it in the urine, and in the secretions generally, and therefore we may be quite sure that it has passed through the skin. After we are quite sure about this, we no longer wish to bring in contact with the skin any chemical substance. The part is prepared for the operation.

On the day of the operation the patient, who has been frequently bathed all over, has a special warm bath; the limb or part to be operated on receives very special attention, and is covered up again in the same way as I described, by the carbolized solution. Then the patient is wrapped in a sterilized sheet and placed upon the operating table. The surgeons and the assistants, of course, must see to the parts that are to come in contact with the wound. Their hands must be looked to. The same process of friction with hot water—as hot as it can possibly be borne—and the scrubbing brush must be used thoroughly to the hands and arms. We of course put on sterilized aprons, as you do here, and we see that no part of our clothing can come in contact with this specially prepared surface. Our instruments are boiled, which is the easiest way of destroying germs. Then we are ready for the operation.

Another very important point that we must bear in mind is this: that the germs cannot develop unless in the presence of moisture, and therefore we take the greatest care that no moisture comes in contact with the tissues. Therefore, before we begin the operation we soak the part with spirits of wine or methylated spirits. We allow this to evaporate, and then the skin of the part becomes quite dry. It also prepares the skin very nicely for operation. The touch becomes firmer, we feel the parts very much better, and the cut with the knife is very much more easy when the skin is thus prepared. We never put into the inside of the wound a sponge with moisture of any kind. We guard against moisture, and in order to do that we use simply sterilized gauze as a sponge. One person alone has charge of the sterilized material. We have a nurse whose special duty it is to prepare and to be responsible for the whole of that material. We never allow anybody to interfere with her. We have a bacteriologist whose special duty it is to look after us. He can at any time take a scraping from my fingers, or from my nails, or from any part which he thinks he might wish to take a scraping from. The nurse's hands are also very carefully looked after. Every now and again there may be a scraping taken from her hands. Each bit of dressing that is prepared may be subject to the same investigation. The bacteriologist, whose special duty it is, once a week takes a scrap of dressing from some part which he may deem expedient, and submits it to a culture test. If he finds any germ upon that, it is reported, and then a minute investigation requires to take place. But we very seldom find that he gets anything to report upon; and that I think is rather a danger. I am glad that it is so, in a sense, but then we are apt to become a little careless when we find investigation after investigation resulting in nothing. So every now and again I myself say "I want this or the other thing to be investigated." The bacteriologist does not know what might have happened to that tissue. It is possible there might have been a scraping of tissue that had been prepared in a certain way given to him, and therefore he is always on the *qui vive* so as not to make mistakes. When we prepare catgut it also is subject to the same investigation. Of course, every thing human is liable to error, and we have to guard as well as possible against errors.

When the operation is begun, dry sponges are used for the wound, they soak up any blood or secretion that may be there, and once they have been pressed into the wound their function is over. We drop them underneath, and if we want another it is handed to us, and we touch it but once. We do not use that gauze again. We find it better to burn it, the aseptic influence of cremation is very sure; there is no doubt about where it goes after that. If one uses a sea sponge it requires to be washed with very great care. A sponge which has been placed in contact with tubercle is a source of danger if used again. Tubercle is very difficult to eradicate, and if one takes a sponge that has been used on a tuberculous surface and puts it on a fresh wound, unless the vitality of that tissue has been very great, the infected sponge will be apt to inoculate that tissue with tubercle. If, however, you have used the dry sponge in the way that I speak of, and discarded it after the first use, it can never convey infection. Therefore, we watch particularly that all pieces of dressing material that come in contact with the wound are destroyed after being used. I quite grant that it is a little more expensive to do that than if we used again and again the same sponge wrung out of a solution. After all, expense is a relative term. We do not wish to have the responsibility of conveying anything from one wound to another, and therefore we think that even at the increased cost it is better to secure that end. It is a matter of very little moment what this sponge material is made of, provided that it is absorbent. The cheapest material that can be got, if it is thoroughly sterilized and will rapidly absorb, is all that is necessary.

With regard to the wound: after our operation is over, we, of course, see that no blood-clot is left. There are many people who say that blood-clot, if it is aseptic, can do no harm in a wound. There is this about it, however, that it is not vital. There are also unfortunately some pathologists who tell us that blood-clot can be organized. Red blood-clot never can. Red blood-clot is a dead tissue. Once it has become a clot it is dead. It may be absorbed, but it never will be organized. Dead blood-clot in a wound affords pabulum for germs to develop in. If one wants to locate tubercle in the tissues, inject the tubercle into the circulation of a guinea pig or a rabbit, and bruise a limb after the tubercle has been introduced into the circulation, so that a quantity of infected blood will be thrown out into that limb, and on *post-mortem* examination after an interval one finds there, in the midst of this extravasated blood-clot, the germs of tubercule. It is the very medium which the tubercle wants to develop in. Everyone knows that tubercle very often follows a little injury—a slight knock or a bruise—and it is just the extravasation caused by a slight knock or bruise that facilitates the development of those germs. They develop in that part because they get moisture, abundance of pabulum, and they are kept away from the action of the living tissue, somewhat protected by the blood-clot. In the periphery of a blood-clot the leucocytes penetrate, but unless it is a very thin layer the leucocytes cannot penetrate into its interior, and in the interior there will be abundance of pabulum for the germs to develop in; and therefore one must see that the whole of the blood that is oozing from that wound is thoroughly arrested. If we find that there is still a quantity of blood oozing from the tissues, a parenchymatous hemorrhage, then, instead of closing the wound we put into the interior of it aseptic gauze which will absorb very quickly all the blood that will be poured out. Forty-eight hours afterwards we remove this tampon, and then we have a surface which is dry and at the same time quite free from bleeding. In order to prevent the little oozing which sometimes comes about from the surface of a wound in peeling off the dry gauze, at the end of 48 hours, we sometimes—in certain tissues and in certain places—introduce a portion of what Mr. Lister used to call protective plaster. It is oiled silk with a coating of dextrine mixed with carbolic acid; therefore when that is placed over the wound it will peel off with very great readiness when you remove the tampon from the inside. But in order to prevent the tampon from simply damming back the blood, as it would do if we placed this impervious material next to the wound, the silk is perforated by many punched out apertures through which the blood passes, and is absorbed by the gauze in the interior of the protective plaster. We find that with those perforations, when at the end of 48 hours we take out this tampon, that it is filled with blood or serum, as the case may be, then the whole of the protective plaster, which is next to the wound, will peel easily away. Therefore, we avoid in that way the little bleeding from minute vessels which might otherwise take place if we put the gauze directly into contact with the wound. When we succeed in arresting the hemorrhage from all the vessels without this tampon, of course we put in stitches in the ordinary way. A long time ago we used to introduce drainage tubes, and I had a considerable amount of experimentation in the way of getting absorbable drains. Neiber, of Kiel, had introduced drainage tubes made from horse and ox bone, and he had a very expensive instrument devised for the purpose of drilling the bone in order to get a hollow tube which would answer the purpose of a drainage tube. We had to pay for each of those drainage tubes a shilling and sixpence, and it became rather expensive for a hospital to provide them. Instead of employing this expensive machine, I thought we might employ Nature to drill the tubes for us; and so we found that Nature had provided an excellent substitute in the shape of the hollow bones of birds. The domestic variety of fowl furnished us with abundance of tubes of that kind, and we further found that one could even boil the fowl and use it for food; after which the bones could be collected and carefully decalcified with hydrochloric acid and all the earthy matter removed. They were then rendered aseptic, and a pliable, elastic tube of chicken bone resulted, which was perfectly serviceable for drainage purposes. When introduced into wounds it had the advantage over India rubber that after it had served its purpose it was eaten up by the tissue. We made the patients eat the flesh of the chicken, and then we made the patients' flesh eat the chicken's bones. It served admirably for the purpose for which it was intended.

I always use catgut for the purpose of stitches and also for the purpose of ligatures. If I did not prepare the catgut myself, or at all events under my own observation, I would use silk. If catgut is not rendered thoroughly sterile, it is liable to produce mischief. No doubt you can prepare silk much more easily than catgut; but we object to silk because it is not absorbable. We object to silkworm gut for the very same reason. Many say that silkworm gut is absorbable. Recollect that there is a difference between absorption and disappearance. You can put a dozen or a hundred ligatures of silkworm gut into an abdominal cavity and the probability is that you will not see many of them afterward. You are not therefore to come to the conclusion that they are absorbed. We have experimented on the lower animals with silkworm gut. I don't know that these ligatures never will be absorbed, but I know that a year afterward we found them exactly as they were when introduced. Microscopically there was no erosion over the surface of the ligature. We therefore try to introduce a substance that will be absorbed, and we have a catgut which we prepare with two objects: first, that it will be aseptic; and, second, that it will answer a physiological test. We wish the catgut to be absorbed within a definite period. We wish the catgut in some instances to be able to withstand the attacks of the leucocytes for three weeks and afterwards to be slowly absorbed. There are some who will tell you, "Oh, but we want a catgut that will last forever in the tissues. We would like, let us say in the case of radical cure of hernia, to bring the pillars of the ring together and keep them always fixed with this mechanism." But you gentlemen know that such a thing is impossible. Wherever tension is applied upon a ligature or a suture, the enclosed tissues ulcerate or become absorbed in front of it until it comes to a position of rest, and there is no use trying to get a material that will keep forever, a living structure upon a strain. The absorption of the tissue will go on at the point of pressure and ultimately it will come to a standstill as a foreign body. We can introduce into the tissues, of course, pieces of silver, of gold, and of other metals, which will remain indefinitely. That is all right as long as they remain in a position of rest when they may be surrounded with connective tissue and become encapsulated, but to keep a strain on living structures over three weeks without causing absorption is impossible. The tissue will absorb and absorb in front of the strain until that foreign substance that has been introduced comes to a position of rest; and therefore we no longer wish to introduce into the tissue a ligature that will resist the action of the living tissue indefinitely. If we do not get the union which we ought to obtain in that time, then we fear that it will be imperfect or that it will not take place. There are many easy ways of demonstrating a point of that kind. I do not know whether you in this college use pins, after excision of the knee-joint, for the purpose of keeping rigid the tibia and the femur? We introduce those steel pins from the tibia to the femur, until the whole limb is rendered perfectly rigid by this mechanical appliance. If we tried, immediately after introducing one of those pins, to take it out (sometimes we have had the misfortune to put it in a little too much to one side), we find a very great difficulty in doing so. But three weeks afterward, when we come to open the wound for the first time, we take those pins between the finger and thumb and lift them out with the greatest ease, because around their circumference absorption has meanwhile taken place, even in the bone. And so it is with regard to the soft tissue, only in the soft tissue the absorption takes place more quickly.

Whenever we have finished the operation, we put on the outside a material, a dressing, which will simply absorb any discharge which comes to the surface. Of course I wish you to understand that we no longer use chicken-bone drainage tubes. We do not require to drain. We put nothing inside of the wound, no foreign matter, in the shape of a drain, we take away any blood or serum that may be inside, and then we close the wound. We have kept it dry during the whole operation, and just before finishing we see that it is made as dry as we possibly can make it. We close it with the stitches, and put over it a dressing which will absorb with rapidity any discharge which might possibly issue, blood or serum. The other point is that we put that dressing on in such a way that we will maintain an elastic pressure, so as to keep the surfaces of the wound gently but firmly in contact. We use for that material wood wool, a material used in commerce. That wood is prepared by crushing; it is used for making all sorts of things in the "old country." There ought to be no difficulty in getting it here, because there is abundance of wood, and it ought in this country to be one of the very cheapest materials for dressing. Besides being cheap, it absorbs more fluid than most other substances that are similarly employed. The wood-wool is placed inside of a bit of sterilized gauze; the whole is sterilized in the form of a pad, and it is put over the limb with an aseptic bandage. Very frequently we put on the outside a plaster bandage, merely for the purpose of holding the parts together, and then our dressings are finished. In the great majority of cases the wound is not looked at until it is healed. We take the temperature, the rectal temperature, always. We have it then regularly recorded at the bedside, and this is watched carefully. If there is no pain or inconvenience, as there ought not to be, and if the temperature and the general condition of the patient is good, then we feel quite satisfied.

It is rather difficult, with those who have been educated in another school, to convince them that the wound can heal under one dressing. A gentleman came to me on one occasion with a complaint. I had operated upon his wife for the removal of a carcinoma. It was a very large wound, and at the end of a week he came to my consulting room, and said, "Doctor, I am very sorry to complain, but you know I don't think you are looking after that wound correctly." I asked him what he would have me to do. "Oh, well, my wife says, and my own doctor says, that you come in for a moment, look at a chart at the head of the bed, and you say something about the weather and wish her good morning." "Yes," I said, "what would you like me to do?" "Well, you must dress the wound." I said, "Why would I dress the wound?" "Because we want it to heal." "But," I said, "do you fancy that I heal wounds?" "Yes, certainly." "The wound," I replied, "will heal itself; there is no difficulty about it. If we dressed wounds in the way you speak of we would be like children who take beans and plant them in the ground and dig them up every hour to see if they are growing. If you will have a little faith and wait until the end of the second or third week, then we will dress for the first and last time, and you will see that it will be all right." It was with difficulty that I persuaded either he or his doctor to leave things alone until the end of the third week; and the doctor came with very great misgivings to look at this part; he said, "Besides, you know you have not taken the stitches out." I said, "The tissues will look after the stitches; they are all right." So when the dressings were removed, a little bit of aseptic gauze was taken and the surface of the wound was wiped, when all the superficial portions of the stitches dropped off; they were shed along with a pellicle of scarf skin from the outside of the wound.

That is what we get whenever we succeed in treating our cases aseptically.

SOME UNUSUAL CASES IN OPHTHALMIC PRACTICE.

By WM. ELLERY BRIGGS, M.D., Sacramento, Cal.

Read before the California Northern District Medical Society.

In grave constitutional disturbances, local affections often receive far too little attention. As a result we find, not infrequently, when the patient has recovered from some severe fever or contagious disease, that an organ of special sense has lost its function beyond the hope of aid. Often the most careful treatment could not have averted the misfortune. The physician would, however, frequently avoid blame to himself and disappointment to the patient, by giving more attention to those affections of the eye and ear which arise during the course of serious general disease. The following cases will, I think, interest general practitioners, as they have, mostly, been the direct result of some constitutional disturbance or some concurrent local affection.

CASE I.—*Metastatic Septic Panophthalmitis from Pneumonia.*—R. E——, æt. 54; mechanic; had been suffering from pneumonia with excessive purulent expectoration and high fever for about a week, when his right eye suddenly became red, swollen, painful, and blind. When called by the attending physician to treat the eye, I found the ocular conjunctiva greatly swollen and chemotic, and the eyeball somewhat prominent. The cornea was largely opaque, there was pus in the anterior chamber, the pupil was contracted, and the iris inflamed. Intraocular tension was markedly increased and vision totally destroyed. In spite of treatment the cornea sloughed and the lens was expelled before the death of the patient, which took place a few days later.

CASE II.—*Metastatic Septic Irido-choroiditis from Capillary Bronchitis.*—T. L——, æt. 2, had been suffering from capillary bronchitis, with considerable muco-purulent expectoration, when I was called by the attending physician on account of photophobia and redness of the right eye. I found ecchymosis of the ocular conjunctiva, immobility of the iris, considerable vitreous opacity which prevented, a view of the fundus, a slight increase of tension, and photophobia. There was evidently only the perception of light present. Two or three drops of a 1 per cent. atropine solution were dropped into the eye, four times daily, and compresses, wet in water as hot as could be endured, were applied for half an hour at a time, several times a day. The pupil was kept well dilated and the hot compresses continued for two weeks. The child soon recovered from the pulmonary trouble and at the end of six weeks a view of the fundus could be had with the ophthalmoscope, which showed some slight vitreous exudate still present. The child ultimately recovered, with good vision in the eye.

CASE III.—*Metastatic Ophthalmia in Typhoid Fever.*—Mrs. G——, æt. 52, had been suffering with typhoid fever for about two weeks, when I was called in consultation on account of dimness of vision, and redness and pain in the left eye. The ocular conjunctiva was found congested, the cornea clear, the pupil inactive, and a cloudy condition of the vitreous which prevented a view of the fundus. Vision was equal to counting figures at three feet. The eye symptoms had appeared within 24 hours and a grave prognosis was made. Atropine was instilled, and hot water compresses applied The patient's temperature had been unusually high for several days. The day following the eye had become much worse. The cornea was hazy, the vitreous exudate greatly increased, the tension had increased to stony hardness, the ocular conjunctiva had become chemotic, the patient was suffering intense pain, and the vision was entirely destroyed. Two days later the sclerotic was becoming staphylomatous in the ciliary region and two incisions were made to allow the escape of the purulent contents of the eyeball. The eye was frequently irrigated with warm bichloride solution (1:2000) and hot moist compresses of boracic acid were kept constantly applied. The inflammation gradually subsided, the eye atrophied, leaving a good stump, over which the patient wears an artificial eye.

The question might naturally arise whether enucleation was not indicated at an early stage of this case. There were two conditions that contraindicated such a procedure: (1) The low condition of the patient. (2) The eye in a state of panophthalmitis. Enucleation of an eye during panophthalmitis has occasionally been followed by death from extension of the septic infection to the brain and its membranes. Under strict antiseptic surgery the danger of such a complication is undoubtedly less than under older methods; still, unless the indications are urgent, it is generally best to avoid the risk.

CASE IV.—*Extensive Corneal Ulceration and Blindness from Herpes Zoster.*—Mr. E——, æt. 58, had been suffering three months previous to consulting me, with extensive herpes zoster, implicating the left side of the face and forehead. The ulceration of the skin had healed, but there were extensive scarring. The cornea was extensively ulcerated and the eye painful. There was a slight muco-purulent secretion, the cornea was anesthetic, and the intra-ocular tension normal. The eye could only perceive light. The patient complained of a constant severe and deep-seated pain in the eye, and as his general health was impaired, he was put on tonic treatment. Atropine solution was used twice daily, the eye was bathed several times daily with warm boracic acid solution, and yellow oxide of mercury ointment—one grain to the drachm of vaseline—was introduced into the eye once a day. Hot water was applied for half an hour at a time three times a day. Under this treatment the corneal ulcers healed and the pain subsided, but no useful vision was restored. The cornea remained anesthetic.

CASE V.—*Congenital Conjunctivitis.*—Mrs. C——, æt. 32; after a normal pregnancy was confined on September 18, 1896. Labor was short, but normal. The attending physician reported that when the amniotic fluid was discharged, about half an hour previous to the child's birth, the odor was almost intolerably offensive. The water was excessive in quantity, but normal in appearance. When the well developed child was born its lids were noticed to be considerably red and swollen and the conjunctiva chemotic. I was immediately called, seeing the child within three hours from the time of birth. The lids of both eyes were swollen and red, the conjunctiva red and swollen to such an extent as to cover the border of the cornea. The cornea were clear, and there was a moderate quantity of muco-purulent secretion in the conjunctival sac. A 2 per cent. solution of nitrate of silver was applied to the everted lids twice daily, the eyes were washed out every hour with a saturated solution of boracic acid, and cold compresses wet in 1:5000 bichloride solution were kept on the eyes. Under this treatment the eyes rapidly recovered, and the patient was discharged cured within ten days.

The fact that a child born to the same patient about 10 years ago had severe ophthalmia neonatorum may throw light on the case. It was treated by me in a similar manner, and made a perfect recovery. Although I was unable to get a history of gonorrhea, I thought it to be the most probable cause of the first case.

CASE VI.—*Nasal Tuberculosis.*—Mrs. L——, æt. 30, consulted me on account of nasal stenosis and excessive nasal secretion. The nasal cavity was found to be obstructed on both sides from a new growth resembling sarcoma in appearance. The growth seemed to spring from several points on the septum and turbinated bodies. I removed a piece of the growth with the snare to submit it for microscopic examination. Dr. H. d'Arcy Power, of Sacramento, kindly made the following report on the specimen examined:

Report of Pathological Growth in Nose.—Sections taken from the specimen after hardening were stained with carmine, and also with picro-carmine, and mounted both in Tarrant's fluid and in balsam. All methods gave practically the same results. The mass consists entirely of small round cells with large nuclei supported by a very slight and often badly defined stroma. But few vessels are present, and these without distinct walls. The structure is embryonic in character, and while in some respects resembling a nasal myxoma, it has also the character of a polypus in a state of sarcomatous degeneration. There is nothing of a carcinomatous nature about it.

Shortly after the appearance of the nasal trouble the patient developed disease of the wrist joint, which her family physician diagnosed as tubercular. In spite of treatment the patient succumbed to tubercular disease in about six months.

CASE VII.—*Mastoid Disease without Middle Ear Suppuration.*—Mr. H. W——, æt. 33, an engineer, consulted me on account of dulness of hearing in the left ear and pain about the ear. Two weeks previously the patient had taken a severe cold, and for ten days the hearing had been dull, and pain was occasionally felt about the ear. The severity of the pain was greatly increased at night, often awakening the patient out of sound sleep. The drum membrane was found slightly reddened about the short process of the malleus, with a little general haziness, but was otherwise normal. There was no swelling of the meatus or of the mastoid, though there was tenderness behind the point of the mastoid on deep pressure. The patient's post-nasal catarrh was treated by a spray of menthol, eucalyptol, and alboline; the middle ear was inflated through a eustachian catheter, and an ice bag was kept pretty constantly applied for a week. The hearing improved, the pain disappeared, the slight inflammation of the membrane passed away, and the patient was allowed to return to his home to Nevada. After being at home for a week or ten days the pain returned, and he soon appeared again for treatment. The drum membrane was still free from inflammation, but there was some swelling in the upper part of the meatus. There was no apparent redness or swelling of the mastoid, but marked tenderness was evinced on pressure behind the point of the mastoid process. The pain was so severe as to prevent sleep except with the aid of an opiate. It was decided to open the mastoid cells, which was done by first making an incision two inches long behind the ear down to the bone. The periosteum was pushed back and the bone found to be abnormally vascular. The cells were opened by the chisel and mallet, but pus was not found until I had gone in quite deeply. The cells were abnormally vascular and softened. The curette was used to clear out the granular and suppurating tissue which was found to be extensive. The mastoid antrum was opened and well curetted, the clean cavity well packed with iodoform and iodoform gauze, and covered with the same material. Scarcely any pus formed in the wound when healing. It was kept well packed with gauze until the cavity had filled up from the bottom.

There is nothing unusual in this operation, nor is it so infrequent to see mastoid disease in cases where there has been no middle ear suppuration, as is generally supposed. There is little or no doubt that the septic infection reaches the cells through the middle ear, but does not happen to set up suppuration until the mastoid antrum, or the mastoid cells, have been reached.

429 J street.

BROMINE AS A TOPICAL APPLICATION IN DIPHTHERIA.

By E. B. Robertson, M.D., Jackson, Cal.

Read before the California Northern District Medical Society.

To fully appreciate the value of bromine in the treatment of diphtheria, it will be necessary first to determine the nature and character of the disease.

Definition.—Diphtheria is a specific, infectious, and contagious disease. It may be epidemic or endemic, and occasionally sporadic. It is characterized by changes in the mucous membrane of the fauces, frequently invading the larynx and nares, or other mucous membranes as the vulva. The disease is usually accompanied with fever, and more or less prostration of the vital powers.

Etiology.—This disease is wholly dependent for its production upon the presence of specific germs. Though these microörganisms are not always present in connection with filth, yet foul sewers, cesspools, and other places where decomposition of organic substances are in progress, are conducive to the propagation of the specific organisms.

Pathology.—The microbes already mentioned effect a lodgment upon the mucous membrane and burrowing into the tissues rapidly multiply, and by their presence create an inflammation, attended with redness and swelling, and perhaps enlargement of some of the lymphatic glands. The disease, in its incipiency, is strictly local—the opinions of writers to the contrary notwithstanding. The inflammatory action accounts for the constitutional disturbance always present prior to the time at which the diphtheritic patches can be seen. When the patches are discovered the disease has already reached an advanced stage.

Diagnosis.—Diphtheria may be distinguished from scarlet fever by the absence of the rash and of the strawberry tongue, while the fever is much more violent in the latter disease. The sore throat in scarlatina-maligna may tend to gangrene, but there will be no diphtheritic membrane unless the two diseases exist together, which is not at all probable. It may be differentiated from tonsilitis by the fact that diphtheria always imparts to the breath of the patient a peculiar fetor of a gangrenous character.

The diphtheritic patches are continuous with and are portions of the mucous membrane with which they are connected; they are whitish in color and are not exudatious, except so far as the inflammatory action necessarily present causes some lymph deposition in the interstices of the part affected. The patches frequently seen in tonsilitis are white, irregular in form, with abrupt margins, and may be properly regarded as exudations.

Prognosis.—When the larynx or nares, or both, are involved by the diphtheritic membrane the prognosis will be unfavorable, though not necessarily fatal. Again, if the diphtheritic patches have existed four or five days or more without treatment, the prognosis should be guarded, as there is no certainty of the result, though the patient may recover with efficient treatment. Very early treatment, then, is the *sine qua non* to success.

Treatment.—If the foregoing description of the phases of diphtheria be correct, it would seem necessary to find, if possible, some antiseptic or germicide, the application of which would destroy the bacteria upon which the disease depends. It may be safely stated, however, that we have no specific in medicine. Though quinine for intermittent fever, and mercury for some stages of syphilis, may be regarded as such, they are not absolutely so. We have in bromine—used as I will endeavor to describe—for the treatment of the early stages of diphtheria what I regard as the nearest approach to a specific of any drug of which I have any knowledge in medicine.

It may be interesting to some of the members of this Society to learn how I happened to adopt the bromine treatment in diphtheria. In the winter of 1860–61 I was a drug clerk and student of medicine under Dr. A. H. Hoerchner, at Mokelumne Hill, Cal. In the latter part of that winter diphtheria prevailed there epidemically, and nearly all the cases were fatal. Dr. Hoerchner had signally failed, having lost all of his cases. In looking over the *Pacific Medical Journal* for February, 1861, I noticed an article by Dr. John F. Metcalf, reproduced from the *Medical and Surgical Reporter* of Philadelphia, with the following title, "Bromide of Iodine as a Topical Application in Diphtheria." The writer mentioned 5 cases treated successfully with bromide of iodine. One of these was as follows:

> "My object in addressing you this note is not to speak of the general medication in diphtheria, so much as to call attention to a fact that in 5 cases I have found great benefit from a topical application of which I have seen no published recommendation. In the winter of 1859–60, a student in the University Medical College, suffered from an exceedingly severe attack of the disease. There were all the well marked constitutional symptoms, with swelling of the lateral cervical glands; there were abundant patches of exudation on the tonsils, uvula, root of the mouth, and posterior pharyngeal wall. This gentleman was a son of Dr. Webb, of Hempstead, Long Island. As a probably fatal prognosis had been made in the case, the young man's father had come to New York, bringing with him a vial containing a mixture of bromide of iodine in mucilage or syrup of gum arabic—two drops of the former to a fluid ounce of the vehicle. This he said he had heard, was a good antiseptic, and might prove useful in his son's case, as there was the usual fetid character of the breath. Drachm doses of the medicine were taken internally at intervals of several hours; and with a camel's hair pencil, it was applied frequently to the patches of exudation. It certainly acted as a disinfectant; but it was followed by a remarkable change in the appearance of the membranes. Within 24 hours they had apparently broken down, disappearing in spots, entirely, and leaving the mucous membrane red and smooth, where the white exudation had formerly existed; within the next 18 hours the fauces and palate were entirely freed from pellicular matter." [The patient subsequently recovered].

The author further says:

> "The topical application I have employed has consisted of 4 or 5 drops of the bromide to the fluid ounce of gum syrup, well applied to the diphtherial patches every two hours. There is nothing unpleasant to the taste or smell in the tincture thus prepared, notwithstanding the very disagreeable nature in both these respects, of the pure liquid."

I called the attention of Dr. Hoerchner to the article, when he said that he was not aware of the existence of a bromide of iodine, and that bromine and iodine were so analogous, he doubted whether there was such chemical affinity as to form such a compound. We searched all accessible authorities, but failed to find any such formula. Finally, the doctor, having failed with all other methods of treatment, decided to try bromine, in a similar manner to that described by Dr. Metcalf for the use of bromide of iodine, with the addition of a small percentage of alcohol as the solvent. After some experimentation he adopted a formula, which proved so satisfactory that he continued to use it without any medication. I have followed in his footsteps, in the treatment of all cases of diphtheria, since I began practice in March, 1864.

Bromine is readily soluble by the addition of 10 per cent. of alcohol. The solution, if long kept, however, loses its color and becomes hydrobromic acid; it should, therefore, be prepared in small quantities as required for use.

My method of treatment is as follows: Ordinarily it will be useful to commence by the administration of a cathartic, in which case I prefer a few grains of calomel and powdered rhubarb. Two hours later I commence the topical application of the bromine solution (using the same strength for all ages and conditions, viz: 8 drops to the ounce), applied in the following manner: Depress the tongue and with a camel's hair brush, probang, or a swab, apply the solution to every part of the diseased membrane and beyond it. The application should be made by the physician until he feels assured that the nurse has learned to do it thoroughly.

The following is the formula for the topical application:

Bromine	4 gtt.
Alcohol Simple Syrup	āā 1 dr.
Water	2 dr.

S.—Apply every four hours.

This topical application is equally useful in tonsilitis, and in other forms of inflammation of the mouth and throat.

Two hours after the application I give one teaspoonful of the following mixture internally to a child five or six years old:

Bromine	3 gtt.
Alcohol. Compound Syrup of Squills	āā 2 dr.
Water	4 dr.
Syrup of Wild Cherry	*ad* 2 oz.

S.—Take one teaspoonful every four hours, alternating with the topical application.

It will be seen that by alternating the topical application with the internal treatment, one or the other will be brought in contact with the diphtheritic membrane every two hours. I give the bromine in doses of one-eighth to one-half a drop, according to the age of the patient.

The efficiency of this bromine treatment will be fully appreciated by every physician trying it, from 40 to 48 hours after the first topical application, and if no improvement is apparent within that time, it will be as well to lay it aside and adopt some other course.

I have now been in practice thirty-three years, during which time I have seen much of diphtheria and I have never used any other treatment than that herein described. During an epidemic at San Andreas, several years ago, I treated 22 cases, of which 2 died; one with diphtheritic croup and the other of septic poisoning. The latter patient had been ill about a week before I saw him.

HERPES ZOSTER.

By T. A. SNIDER, M.D., Sacramento, Cal.

Read before the Sacramento Society for Medical Improvement.

Having had quite a number of cases of zoster under my observation, and being disposed to consider it in some of its aspects as of a more serious nature than it is usually looked upon, I thought a short paper on this subject might interest the Society.

Herpes zoster occurring ordinarily is never considered of a serious or dangerous nature, but cases occurring in the aged, the cachectic, the scrofulous, the syphilitic, present a more serious aspect to the physician. The term herpes zoster is derived from the Greek words signifying to creep, and a girdle. The common name, shingles, Dr. Johnson derives from the Latin cingula, a chain or girdle. The etiology of zoster is very obscure, and in many cases entirely unknown to us; neither age nor sex seems to be a factor in this respect, except that it never occurs in the very young, and oftenest in middle life. Zoster occurs, usually, on one side of the body only, rarely or never simultaneously on both. Most all the cases which have come under my observation have been on the left side. The eruption passes from left to right, or from right to left, as the case may be, and rarely or never passes the median line. Fox says there are no varieties in zoster, the same characteristics exist in all. Regional adjectives are used only for convenience.

Zoster occurs not from any one special cause, but as a result of a general lowering of the tone of the system. Behind the immediate or exciting cause there is a constitutional vice or disturbance, such as anemia, malarial poisoning, tuberculosis, syphilis, mental or physical strain, *la grippe*, or any disturbance tending to debilitate or lower the tone of the system. The immediate or exciting causes are exposure to cold, sudden excitement of the emotions, as joy or grief. Cases are recorded in which the pains of zoster have developed immediately after some excitement of the emotions of this nature. Jonathan Hutchinson and others, both in England and in America, have reported cases which were attributed to the internal administration of arsenic. Erb considers zoster as only the local manifestation of a constitutional malady derived from an external cause—that is, the deposition of an infectious germ.

In confirmation of this view all writers admit that zoster is very apt to become epidemic in hospitals especially devoted to the treatment of skin diseases, and this circumstance is ascribed by Landozi to the prevalence of atmospheric conditions favorable to the propagation of the specific germ. Those who believe in the germ theory of the disease argue that the specific microbe produces an irritation of the spinal ganglia, and the cutaneous symptoms are simply the indirect consequence of trophic disturbance due to the irritation of the nerve filaments. No specific germ has, however, been discovered, so far as I have been able to learn. Dr. Gern thinks there is an analogy between this disease and the eruptive fevers, and this view favors the germ theory; other writers, however, are unwilling to accept this view of the nature of the complaint

Zoster, as a rule, occurs but once in the same individual, but cases have been noted in which the disease has recurred several times. Tilbury Fox reports a case recurring three times, and Kaposi one recurring five times. In a case of tuberculosis, under my own care, three or more attacks were observed during the patient's illness.

Zoster may or may not be associated with constitutional disturbance; the milder cases are rarely attended with febrile excitement. The eruption is always accompanied by more or less burning pain, and sometimes the suffering is very great. In some cases a copious serous exudation takes place, the patches become superficially ulcerated, and gangrene may ensue. Barensprung reports the autopsy of a patient dying of zoster, in which there was gangrene of the skin between the sixth and ninth ribs. I was called to the case of a Portugese in whom the eruption followed the course of the sacral nerves across the lower portion of the abdomen. Immediately over the region of the bladder, down the inside of the thigh, and over the left side of the penis, the integument was black, and that surrounding the gangrenous spots was intensely red and swollen. The patches had the appearance of being deeply imbedded in the tissues. The patient's temperature was very high and the pulse rapid. Death ensued a few days after I first saw him.

The pains of zoster often precede the eruption, sometimes ten days or two weeks. I once attended a patient for, as I supposed, a very severe case of sciatica. He complained of severe pain involving the left hip and leg, and I did not suspect zoster until the eruption made its appearance, several days after. It extended over the cutaneous branches of the entire sacral plexus, being well marked over the hip, the anal region, the inside of the thigh, along the crural nerve, and over the integument of the penis.

The pains of zoster may persist indefinitely, and have been known to be so intractable that the person, in despair, has committed suicide. Danielson mentions an autopsy of a case dying of pneumonia, in which the pains of zoster in the left side of the chest had persisted for two months before death The sixth intercostal nerve was swollen and diseased throughout its entire ramification.

I prescribed for a patient in whom the pains along the intercostal nerves had persisted for months, and though he had consulted a number of physicians, he had failed to find relief. I only saw him a few times and then lost sight of the case.

Zoster frontalis alone, is of little interest, but cases are on record in which the nerves of the eye were involved. The eyeball becomes inflamed, the conjunctiva injected, severe pain is complained of, and the mobility of the iris is impaired to such a degree as to simulate iritis. Ulceration of the cornea and impairment and even total loss of vision sometimes results.

The treatment of zoster must necessarily be of an expectant character, the milder cases requiring but little medication. Those of a more severe type should each be considered individually. The general hygienic surroundings should receive our first care. Good air, suitable food, and every means necessary to comfort and to promote the general welfare of the patient should, if possible, be provided. If the suffering is such as to make repose in bed desirable, the patient should be encouraged to do so, and in severe cases this should be insisted on.

If febrile action is present, aconite and quinine has, in my hands, served a good purpose. Aconite or its alkaloid, in the acute stages of the complaint, not only reduces the febrile symptoms, but I know of no other remedy so efficient to abort the neuralgic pains. The continuous galvanic current passed along the course of the eruption or over the site of the same, where the neuralgia still persists, is beneficial and gives great relief and comfort to the patient. As a tonic and antineuralgic, I have used with benefit the combination of quinine, iron, strychnine, aconite, and arsenic. In a few cases I have prescribed the phosphide of zinc with good results. When the pain is severe and uncontrolled by other means, the hypodermie injection of morphine and atropine, or cocaine, will give temporary relief and is of great value.

The local treatment is principally the protection of the vesicles from the clothing. The application of an ointment composed of iodoform ʒii, cocaine gr. i, morphine grs. iii, simple ointment ℥i, and the part then covered with oiled silk is very satisfactory. When there is much serous discharge, a lotion of acet. plumbi ℥i, acid carbolic ʒiss, ext. opii ℥i, bellad. ℥ss, liquor calcis *ad* ℥vi. The application of collodion is recommended, but it produces an uncomfortable stiffness and prevents the escape of the exudations. The iodoform ointment has a quieting effect and acts beneficially upon the diseased nerve. Of ophthalmic zoster I have no experience, but I would always refer such cases to the oculist.

806½ K street.

MEMORANDA.

A Case of Ptyalism from Trauma.

A. B—— presented himself, suffering from acute ptyalism, causing constant expectoration, and preventing him following his occupation. He stated that he had been injured six weeks before by a fall, that had knocked out two of the upper incisors and severely cut the lower lip. These injuries had been satisfactorily recovered from under surgical treatment, but the ptyalism which had set in shortly after their reception, had persisted in spite of treatment. The latter had included full dosage with atropine, which caused dryness of the mouth and throat, without affecting the flow of saliva. The patient showed the usual symptoms of alcoholism, tremor, feeble pulse, and general prostration, insomnia, and anorexia. Examination seemed to show that the discharge of saliva came principally from the right side. A diagnosis of paralysis of the sympathetic filaments to the glands was made. Whether as a result of direct injury, or as a part of the general low condition, could not be determined. However, I decided on active stimulation, and patient was ordered strychnine, gr. $\frac{1}{20}$, fl. ex. digit. m. v., tr. capsici. m. x., every three hours. After the second dose the ptyalism almost ceased, and while some recurrence subsequently followed, it diminished from that time onward, and is now little more than the normal. The case is interesting as showing the influence of vasomotor constriction in controlling secretion due to depressed function of the sympathetic and as an illustration of the fact that notwithstanding the too often expressed scepticism as to the value of drugs, the role of scientific medicine and rational therapeutics is not to be despised. H. D'ARCY POWER, M. D.

Sacramento, Cal.

DEPARTMENTS.

OBSTETRICS, GYNECOLOGY AND PEDIATRICS.

By WALLACE A. BRIGGS, M.D., Sacramento, Cal., and

WM. FITCH CHENEY, B.A., M.D., Adjunct to the Chair of Obstetrics and Diseases of Women and Children, Cooper Medical College, San Francisco, Cal.

Appendicitis in a Child Two and a Half Years Old.—L. EMMET HOLT reports the case of a little girl only two years and a half old, who was suddenly taken with severe vomiting, three hours after a hearty dinner. The vomiting continued at intervals, but without complaint of pain, and the child did not appear seriously ill. In two days' time she was apparently well again and wanted to get up and run about. But then the vomiting began once more, accompanied by indefinite pain and a temperature of 104° F. The symptoms indicated the abdomen as the seat of disease, but its exact nature could not be determined at first. Later on in the case the vomited materials became grass-green in color and tympanites steadily increased, so that a diagnosis of peritonitis was decided upon. The child died five days from the beginning of her attack and only three days after the symptoms became serious. On autopsy an opening was found in the appendix, about one inch from its distal extremity, and just above this point was a hard concretion about the size of a pea. There was a general peritonitis. At no time during the progress of the case were the symptoms clear enough to justify operative interference.—*Archives of Pediatrics*, January, 1897.

Analyses of Human Breast Milk.—VANDERPOEL and JOHN S. ADRIANCE have made numerous analyses of human breast milk at the Nursery and Child's Hospital, New York. They found its constituents to have the following percentages: Fat, 3 to 4; carbohydrates, 6 to 7; proteids, 1 to 2; salts, .20 (two-tenths); water, 88. The reaction was uniformly alkaline; the average specific gravity, 1030. The fat varied very widely in its percentage in different milks, and the proteids also were quite variable; but the milk sugar was singularly constant in amount. Excessive fat in the milk was found to cause vomiting and diarrhea in the infant, with lack of nutrition and loss of weight; it could be corrected by cutting down the amount of nitrogenous material in the mother's diet. Excessive proteids are produced by lack of exercise, too rich a diet, and nervousness on the part of the mother; they show themselves clinically by interfering with the infant's digestion, the symptoms of which are vomiting and frequent movements of the bowels containing curds of undigested proteids, with colic and loss of weight; they can be reduced by increasing the amount of exercise taken by the mother, decreasing her meat and increasing her fluid diet.—*Archives of Pediatrics*, January and February, 1897.

Antipyrine for Pertussis.—During an epidemic of whooping-cough in the New York Infant Asylum, the new cases as they came in were divided by DR. CHAS. G. KERLEY into groups of 20, and a different drug given to each group. The number and severity of the coughing paroxysms of each child were carefully recorded, to know what impression each drug made on the disease. The duration of an attack was not shortened in a single instance, by any treatment; but antipyrine gave the best results in diminishing the number and severity of the paroxysms. A combination of antipyrine and bromide of soda gave better results than either singly. For a child of eight months, ½ grain of antipyrine with 2 grains of bromide of soda is to be given every two hours; for a child of fifteen months, 1 grain of antipyrine with 2½ grains of bromide of soda every two hours; for a child from two and a half to four years, 2 grains of antipyrine with 2 to 3 grains of bromide of soda every two hours.—*New York Polyclinic*, 1896, vol. viii, No. 2.

A Cause of Enuresis in Female Children.—It has long been known that phimosis with adherent prepuce and retained smegma is a common cause of enuresis in boys. It is now being discovered that adhesions of prepuce to clitoris, with retained smegma, is a not infrequent cause of enuresis in girls. F. HENRY DESSAU reports several cases cured by stripping the prepuce from the clitoris.—*Clinical Recorder*, January, 1897.

SURGERY AND ANATOMY.

By T. W. HUNTINGTON, B.A., M.D., Surgeon Southern Pacific Company's Hospital, Sacramento, Cal., and

GEO. B. SOMERS, M.D., San Francisco, Cal.

Cancer of the Rectum.—In this disease the sacral method (of extirpation) has to compete with the old method of excision on the one hand, and with the operation of colotomy on the other, and in both cases it will compete with success. Colotomy is only permissible when the disease is so extensive that it cannot be removed, and when serious obstruction exists; and excision by the old method is to be reserved for cases in which the cancer is limited to the anus. Under all other circumstances, removal through a sacral incision would appear to be decidedly the best measure. It possesses the following advantages: (1) It insures the recognition of the limits of the disease, and enables us to get as far as possible beyond them. (2) It renders the complete control of hemorrhage comparatively easy. (3) It affords access to the tissues between the sacrum and rectum, and gives facilities for clearing away infiltrated glands and lymphatic vessels. (4) It leaves the sphincter and levator ani muscles uninjured in the majority of cases, and allows the patient to have considerable control over the action of the bowels.—JOHN CAMPBELL, M.D., in *British Medical Journal*, October 10, 1896.

Passive Motion.—SENN, in a recent clinic at Rush Medical College, when presenting a case of fracture of the internal condyle of the humerus, said: "I am firmly convinced that it is desirable practice to postpone passive motion until the intermediate callus is firm enough to prevent motion at the seat of fracture. Postpone passive motion from eight to twenty-one days, in the child; in the adult for three or four weeks. It is by securing rest for the fracture that we diminish, as far as possible, the amount of exuberant callus so often in the way of an ideal functional result."—*American Journal of Surgery and Gynecology*, November, 1896.

The Perfect Surgical Needle.—DR. JOHN B. ROBERTS read an interesting paper before the Philadelphia County Medical Society, from which the following is taken: A perfect surgical needle should be adopted for use by the surgeon's fingers, without the interposition of any other instrument. Its point should emerge exactly where the operator wishes; it should quickly and easily carry the suture through the skin or other tissue, and should be serviceable for sutures of silk, catgut, tendon, silkworm-gut, or wire. It always surprises me to see an operator encumber his fingers with a needle-holder in suturing ordinary cutaneous wounds. The fingers are always better than any other needle-holder, unless the stitch is to be introduced at the bottom of a cavity, where the fingers cannot reach the wound. The perfect surgical needle, which I show, is only a carefully made and slightly modified Glover's needle.—*Medical and Surgical Reporter*, November 7, 1896.

Appendicitis.—The following is taken from some remarks by MR. W. MITCHELL BANKS (*British Medical Journal*, October 10, 1896): "Seeing that it will be admitted that the great bulk of pericecal or appendical abscesses tend to push forward and outward, the great point I would urge is that the incision be not a vertical, but a transverse one, and that it shall reach well back. When the skin and muscles have been divided, the surgeon should then bore with his finger in the direction where he expects to find pus to be. He may come upon it quite behind the peritoneum, and then all that is wanted is a big glass drainage-tube. But if the pus is intraperitoneal, then the peritoneum can be easily opened by pushing the incision a little further forward toward the median line. The bowels can be readily kept back with sponges or gauze and the appendix removed, if diseased, while any pent-up pus can be let loose and washed out. The whole secret is hot water, and more hot water, and more hot water still."

In an address on a series of cases of appendicitis (*British Medical Journal*, Dec. 19, 1896), MR. MAYO ROBSON formulates his rules for determining on an operation as follows: "I always look on an acute onset, with a rapid pulse and tenderness over the appendix, without the presence of tumor, as indicating the need for immediate operation. A more gradual commencement, with a quiet pulse (not over 100), and the early formation of a tumor, are signs that delay may be safe. If, in the course of an appendicitis, at any stage, a rigor, with rise of pulse and temperature occur, operation should be advised, as it indicates septic absorption. The temperature alone is of very little assistance, the pulse being the true guide for treatment. Opium may so disguise the pulse-rate, thus leading to serious or even fatal delay, that I feel sure we best consider the welfare of the patient by trying to give relief in other ways, until the condition to be dealt with has manifested itself. If opium has been given it will be advisable for the surgeon to reserve his opinion and if on withholding the sedative for a few hours the pulse has increased in frequency, and anxiety of countenance has declared itself, operation will be required. Relief or cessation of pain, with a marked rise in pulse-rate, is an indication for immediate operation, as it not infrequently indicates gangrene of the appendix. Distension of the abdomen, with vomiting and rapid pulse are signs that admit of no delay, as they are indicative of an extending or of a general peritonitis."

Surgery of the Gall-Bladder.—DR. J. R. HOLLOWBUSH, of Rock Island, Illinois, details two cases of disease of the gall-bladder; one showing malignant disease of the pylorus, the other obstruction of the common duct by a stone. The clinical histories and conditions present on examination were entirely dissimilar, and, according to the author, emphasized the diagnostic points already laid down by writers on the subject, and especially those given by MAYO ROBSON, in his paper on "Surgery of the Gall-Bladder," read before the International Medical Congress, in Rome, in 1894. The latter says that in all cases of malignant disease with jaundice, the gall-bladder formed a perceptible tumor, while in jaundice dependent upon gall-stone alone, no marked tumor was present. In the first of the above cases (malignant disease), the tumor was perceptible to the slightest touch, while in the second it was only by deep pressure under the liver that a tumor was recognizable, and that only because of the large size of the stone.—*Medical Record*, October 10, 1896.

Crural Hernia.—In an article on the radical cure of crural hernia, DR. KNUT HOEGH speaks of the hour-glass shape of these hernias. He says a "peculiarity of the crural hernia is its hour-glass shape or form; this is of great practical importance, because the construction at the middle of the sac may be mistaken for its neck, and the operator may thus be led to perform an incomplete and therefore useless operation. A crural hernia has two distinct portions, one outside of the saphenous opening, and one inside of it. It is the first named that is apt to turn abruptly over the falciform edge and assume a direction upward and inward. The dissection of this portion is comparatively easy in many cases. The second portion of the hernia occupies the space between the saphenous opening and the inner ring of the crural canal, and lies, of course, much deeper surrounded by large veins, which directly open into the saphenous or the femoral."—*Northwestern Lancet*, January 1, 1897.

Carcinoma of the Breast.—In a clinical lecture by DR. GEORGE RYERSON FOWLER, occur the following suggestive points: The observed varieties of carcinoma of the breast are the medullary, the epithelial, the colloid, and the fibrous. The first named is not infrequently observed. The epithelial has its origin in the nipple, and is comparatively rare. The most common form is fibrous carcinoma or scirrhus. It develops between the ages of 30 and 45. The tumor most commonly makes its appearance at the upper and outer segment of the breast. Glandular lymphatic involvement usually occurs early, though it may not be discovered until later in the disease. The glands beneath the pectoral muscle are first affected, those of the axilla later on, and those in the infra- and supra-clavicular regions last. It has been shown by Heidenhain that there is a free lymphatic connection between the retro-mammary fascia and the pectoralis major muscle, and that infection of this latter muscle occurs almost constantly in advanced cases. It may be present also comparatively early in the disease. As to prognosis, the average duration of life without operation is 22 months. The average duration of life after an operation in cases in which recurrence takes place, is 34 months, a distinct average gain of a year over cases which are permitted to pursue their natural course following the discovery of the tumor. In the operation, it is not enough simply to enucleate the individual glands; the entire fatty and lymphatic glandular contents of the axillary cavity; the loose connective tissue between the latissimus dorsi and pectoralis major muscles; the glands and connective tissue beneath the latter muscle and passing from it to the breast, and, save in exceptionally early cases, the pectoralis major muscle itself, must all be removed. If necessary the pectoralis minor as well must be completely extirpated.—*Brooklyn Medical Journal*, January, 1897.

Silver Treatment of Wounds.—DR. B. CREDÉ, of Dresden, who has been one of the most eminent apostles of asepsis in surgery, has recently placed himself on the side of antisepsis, his personal experience having within the last year convinced him that the antiseptic action of certain compounds of silver affords better protection during the healing of wounds than the most rigid surgical cleanliness. The powdered citrate of silver (known as itol), is the compound most frequently employed. Under the action of the products of inflammation it is at once transformed into lactate of silver, a powerful antiseptic, with a peculiar faculty of killing bacteria for some distance underneath the surface of the tissues. A gauze filled with very finely powdered metallic silver is used as an external dressing. Under ordinary circumstances the silver is inert, but is immediately converted into the lactate when inflammation begins· *Gross Medical College Bulletin*, November, 1896.

OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

BY WM. ELLERY BRIGGS, M.D., Sacramento, Cal.

Inhalation of Formalin in Catarrh and other Diseases of the Respiratory Tract.—DR. J. LARDNER GREEN recommends the inhalation of formalin on account of its germicidal action in the treatment of nasal catarrh and other germ diseases of the respiratory tract. The best results were obtained by placing a drop or two in a Jeffery's respirator and inhaling. If the disease be in the acute stage, one drop will suffice; if too stimulating the respirator should be temporarily removed from the face to dilute the vapor with air. The author also advises its trial in the early stages of tuberculosis.—*British Medical Journal*, January 23, 1897.

A Method of Examining the Larynx in Infants.—DR. LARK describes a method of examination of the larynx in infants, as follows: The infant is supported in the usual position for laryngoscopy. The index finger of the left hand is passed into the mouth, and the terminal phalanx hooked round the hyoid bone, which is pulled forward. The rest of the finger acts as a tongue depressor, and the knuckle as a gag. The left thumb placed under the chin serves to steady the head. If a small laryngeal mirror be now introduced in the usual way, the larynx can be quite easily seen.—*Medical Press and Circular*, March 17, 1897.

Five Hundred Cases of Laryngeal Neoplasms.—PROF. F. MASSEI gives a resume of five hundred cases of laryngeal neoplasms and arrives, as the result of his experience, at the following conclusions: (1) A correct diagnosis cannot be reached without the aid of the laryngoscope, and often, even with it, a positive conclusion cannot be arrived at except by the aid of microscopic examination. (2) The results of endo-laryngeal operation for benign tumors are very favorable. After the removal of the fibromata, the larynx may require treatment to restore the voice. (3) Malignant neoplasms recur very constantly and papillary growths frequently. Cystic and fibromatous tumors may also recur, but the latter are much less likely to return if the base is cauterized. (4) Tracheotomy was performed 26 times in the author's 500 cases. (5) Cocain was always employed for the endo-laryngeal operations. This was used in saturated solution freshly made, by applying directly to the point to be operated upon. (6) In certain cases, either Fauvel's, Mackenzie's, or Schroetter's forceps may possess advantages over the other, but in small fibromata, the author has found Koenig's forceps superior to the others. (7) The author has never seen a benign laryngeal growth become malignant from operative manipulation. (8) In cases of doubtful malignancy endo-laryngeal operation is often beneficial, and by securing specimens for microscopic examination, the diagnosis may be cleared up.—*Tri-State Medical Journal*, February, 1897.

Retro-ocular Neuritis.—MR. MARCUS GUNN, in discussing retroöcular neuritis, said that it was a distinct clinical group of cases, and that, owing to the objective signs not always being present, reliance had to be placed on the subjective symptoms; hence the affection was liable to be considered a hysterical one. The action of the pupils, however, is a most important help in diagnosis, as in hysterical amblyopia the action was unimpaired, while in retroöcular neuritis the pupil was inactive, or where the contraction or exposure to light was normal, it was maintained on continual exposure. Occasionally one or both optic papillæ were involved, but the changes were never gross. In papillitis, due to intracranial disease, the visible changes preceded the loss of vision, whereas in retrobulbar neuritis failure of central vision was one of the earliest symptoms, the visible changes in the nerve occurring later. During the stage of swelling in papillitis, the conductivity of the nerve was unimpaired; it was only during subsidence, when the exudation was shrinking, that the nerve fibers were compressed, whereas in retroöcular neuritis the pressure on the nerve fibers within the pial sheath, especially when inclosed in the bony optic foramen, produced a very early effect, and was recovered from as soon as the pressure was diminished. One of the most prominent symptoms was the presence of a central scotoma for colors and for light, indicating an affection of the macular fibers. This might be owing to the situation of the fibers in the nerve, or to their great functional activity and consequent sensitiveness to pressure; or it might be due to the fact that the principal lymph currents traversed the center of the nerve. The periphery of the visual field was sometimes contracted; if this were partial it would be a valuable sign in localizing the lesion; in taking the visual field care should be exercised in using test objects of standard size. There was pain on movement of the eye, a varying amount of amblyopia, or even where visual acuteness was not diminished, there was slowness in reading test objects, which occasionally seemed to be moving; vision was worse in bright light, or after exhaustion or want of food. The sensation of moving objects might be explained by a breaking up of the medullary sheath, leading to imperfect insulation of the axis cylinders, or by alternating activity of exhausted fibers. The local causes of the neuritis were orbital cellulitis, exposure to cold, general septicemia, periostitis of the optic foramen extending from the adjacent sphenoidal cells, or the cause be a local manifestation of a general disease, such as syphilis, rheumatism, or gout, the latter having a tendency to recur. Finally, the optic nerves might be affected as part of the central nervous system. Retrobulbar neuritis has also affinities with toxic affections of the nerves.—*British Medical Journal*, March 20, 1897.

DERMATOLOGY, SYPHILIS AND VENEREAL DISEASES.

Syphilitic Disease of the Heart-wall.—SIDNEY PHILLIPS, in the *Lancet* of January 23, 1897, presents an exhaustive paper with the above title, in which he summarizes his conclusions as follows: (1) Syphilis may produce gummata or general fibroid change. (2) Gummata in the left ventricle, except of very small size, are dangerous to life, and when near the apex of the left ventricle may cause sudden death. (3) Gummata in the left ventricle may be suspected if in an individual with syphilitic antecedents there occur signs of derangement of the action of the left ventricle with symptoms of defective or embarrassed action, especially angina pectoris, tachycardia, syncopal, or epileptiform attacks; or in the right ventricle when dyspnea, otherwise unaccountable, occurs. (4) Extreme feebleness of the heart without dilatation, gradually increasing, in young or middle-aged persons who have had syphilis, suggest syphilitic disease on the right side of the heart. (5) Dilatation of either side of the heart in syphilitic persons may result from syphilitic fibrosis. (6) Hypertrophy of the heart without ascertainable cause and without corresponding increase in strength of heart suggests syphilis. (7) Aneurism of the heart-wall may result from syphilitic local lesions, and may be fatal with or without rupturing. (8) It is probable that gummata and fibroid disease in early stages may be relieved or cured by the usual specific treatment, and there is every reason to believe that syphilitic lesions of the heart-wall are not less amenable to treatment in their early stages than syphilitic lesions elsewhere, though no cure can be expected where advanced tissue changes are already produced. In what has been written attention has been devoted only to syphilitic disease of the heart-wall apart from valve disease. It is certain that the small number of cases given in the table must represent a much larger number of unrecorded fatal cases—cases in which no necropsy was performed, or the fibroid condition was not recognized or reported—and a very greatly larger number of cases of persons who have suffered from syphilitic heart lesions without their producing death. It is, therefore, certain that syphilitic heart disease is more common than is generally recognized. And its importance is the greater because it affects persons at an earlier age than the usual degenerative heart conditions, and may insidiously advance till it causes sudden death in persons in the prime of life and of apparent health. There can be little doubt that syphilitic heart affections must affect the administration of anesthetics, more especially as a life-long disease like syphilis is apt to produce local conditions that not infrequently require operative interference. Certainly cases are brought in, of death under an anesthetic, from fatty disease of the heart, in which the chief evidence of that condition is that the patient died under an anesthetic; and at the moment of writing, a case is recorded of death under the administration of the A. C. E. mixture, in which "the right ventricle was found dilated, with fatty infiltration of the walls; the left ventricle was also dilated and there was some fibrosis of its walls." Dr. Kirk found that chloroform, if we may judge from a few cases, is liable to give dangerous results in syphilitic subjects.—*Therapeutic Gazette*, April, 1897.

MATERIA MEDICA AND THERAPEUTICS.

By WM. WATT KERR, M.A., M.B., C.M., Professor of Clinical Medicine, University of California, San Francisco.

The Treatment of Consumption by Oil of Cinnamon.—It appears probable that the oil of cinnamon cures consumption in two ways: (1) In the early stages of catarrhal phthisis, by so directly affecting the bacilli as to stop their growth. (2) In cases that are rather far advanced, by only allowing organisms incapable of growth to pass along the bronchi, and thus prevent the infection of fresh lobules. In this way the disease may be limited to small areas, where it can be dealt with by the vital processes of the body, and cut off from the system by the formation of fibrous tissue, and so cease to be an immediate source of danger. An interesting feature in the cases observed under this treatment was the order in which the symptoms subsided. The expectoration and the cough were the first to improve, then the temperature tended to the normal, and finally the weight began to increase. These favorable changes in the symptoms were accompanied by a gradual diminution in the number of the bacilli in the sputum. With regard to the form of inhaler used, I found that those in ordinary use served the purpose very well. In the early stages an inhaler covering both the nose and mouth should be used; in the later stages, when there is shortness of breath, cover the mouth only. The inhalations do not produce any constitutional symptoms, nor irritation of the buccal cavity.—DR. J. H. THOMPSON, in *British Medical Journal*, November 7, 1896.

Urea as a Therapeutic Agent.—G. KLEMPERER says that urea in large doses acts as a diuretic, and is able to keep uric acid in solution. He orders 10 gm. of urea in 200 c.cm. of water, the dose being one teaspoonful of this solution. When possible the whole quantity is taken in the 24 hours. The urea is increased to 15 gm. in two days, and to 20 gm. in four days. Occasionally diarrhea was noticed, and this was not altogether undesirable. This urea treatment is continued for 14 days, but much larger doses have been employed by the author. In Bright's disease no diuretic effect was noted, and this confirms the view that urea is excreted by the renal epithelium, which it stimulates to greater activity. The best results were obtained in ascites due to hepatic cirrhosis and in pleural effusion. In heart disease the result was variable. Sometimes considerable diuresis was produced, but more frequently it was only moderate in amount, and occasionally absent altogether. The author would refer this absence to the altered renal epithelium. Considerable albumin is a contraindication. Mixed with equal quantities of bicarbonate of soda and carbonate of lime it is useful in the treatment of cases where there is a tendency to the formation of renal calculi, as it retards the formation of the calculi, although it does not dissolve them.—*British Medical Journal*, December 19, 1896.

Trional.—In a short paper by DR. ARTHUR HENNIG, in the *Wiener Med. Presse*, Nos. 46 and 47, 1897, tribute is paid to the value of trional as a hypnotic, and it is stated that toxic effects can be avoided by paying attention to the following directions: The drug should first be administered in a dose not exceeding 1.5 gm. to adults, and in smaller doses to children, and should be given finely pulverized and dissolved in hot water, or any other fluid, immediately before retiring. Attention should be paid to the appetite, digestion, and urinary secretion, even when the remedy is only occasionally employed. If marked anorexia and severe constipation exist, it should be employed very cautiously, and this likewise holds good in cardiac and renal affections. It is also advisable to make pauses every few days during its prolonged administration, not from any fear of cumulative action or habituation, but because any remedy which is intermittently exhibited, and especially the hypnotics, acts more uniformly when given this way than when taken continuously for long periods of time without interruption. During continued use of trional for weeks and months, it is further advisable to stimulate diuresis and to increase alkalinity of the blood by rectal injections and the administration of carbonated waters.

MEDICINE AND PATHOLOGY.

By ALBERT ABRAMS, M.D., Professor of Pathology, Cooper Medical College, San Francisco.

Hemoglobinuric Fever.—BOISON reports the detailed histories of three soldiers, who returned from Madagascar, suffering from severe malaria. The paroxysm was ushered in by a shivering stage of prolonged duration. Icterus develops. The temperature may reach 105° or more. The sweating stage is also prolonged. The destruction of red blood corpuscles is pronounced. In two cases the blood count fell respectively from 1,700,000 to 670,000, and from 2,400,000 to 1,600,000 in 24 hours. The plasmodia were present in very large numbers. Blood serum secured by cupping showed with the spectroscope, oxyhemoglobin, hematin, and urobilin. Boison considers the jaundice to be of hematogenic origin. The hemoglobinuria is preceded by hemoglobinemia. The hemoglobinemia is the mechanical effect of the malarial parasites. The writer attributes the hemoglobinemia, and the resulting hemoglobinuria, to the splenic lesions, the venous sinuses of the spleen having been found to be filled with yellow pigment. The splenic circulation being thus inhibited, that organ was incapable of transforming hemoglobin.—*Révue de Medicin.*

The Typhoid Bacillus in Osteomyelitis.—The number of authenticated cases of osteomyelitis caused by the typhoid bacillus is extremely limited. BRUIN reports a case in which the left tibia was affected. From the pus of the affected bone the bacilli of typhoid fever were isolated. The patient had contracted typhoid fever 6 years previously, and an osteoperiostitis of the femur of the other extremity during convalescence. At that time he had also had pain in the left limb, but this had subsided, but in late years had recurred at intervals.—*Annales de l'Institut Pasteur.*

A Simple Method of Distinguishing Diabetic from Non-Diabetic Blood.—Dr. R. T. Williamson has found that diabetic blood is more powerful than non-diabetic blood in removing the blue color from a solution of methyl blue. The reaction is so sensitive that the difference can be detected by the examination of a drop of blood from the finger. He describes the following as his method: Into a narrow test tube are placed 40 cubic millimetres of water (the capillary tube of a Gower's hemoglobinometer, which is marked for 20 c.mm., may be used for measuring the fluid), 20 cubic millimeters of blood are added, and then 1 cubic centimeter of a 1 in 6,000 watery solution of methyl blue, and afterwards 40 cubic millimeters of liquor potassæ. The tube is then placed in a capsule or vessel containing water which is kept boiling. At the end of four minutes the blue color disappears and the fluid becomes yellow if diabetic blood has been used, but in the case ot non-diabetic blood the blue color remains. Dr. Williamson has demonstrated the efficiency of his method in over 30 examinations of diabetic blood (from 5 cases of diabetes mellitus), and by control investigations with blood taken from persons suffering from other diseases.—*Medical Press and Circular.*

Toxicoses of the Nervous System as a Cause of Pulmonary Consumption. Dr. Thomas J. Mays, in a paper on this subject, presents the fundamental idea that irritation of the nervous system, and especially of the pneumogastric nerves, leads to some forms of pulmonary disease, and frequently to pulmonary consumption. The author claims that there are a number of poisons generated within the body, and also introduced from without, which intoxicate the nervous system and become a prolific source of pulmonary consumption. These poisons are alcohol, syphilis, mercury, lead, typhoid fever, diphtheria, measles, whooping cough, etc. Of these poisons, alcohol is the most prone to bring about pulmonary mischief through the medium of the nervous system, and a number of examples giving *post-mortem* proof of this were cited. While all these poisons bring on pulmonary disorder by undermining the nervous system, their action depends on the virulency of the poison, on the amount and frequency with which they are introduced, on the persistency of action, and on the facility and difficulty with which they are excreted by the body.—*Boston Medical and Surgical Journal.*

Antitoxin Fatalities.—Gottstein has collected all references to death under and presumably from antoxin treatment. He enumerates 14 cases in which children suffering from diphtheria appeared to have died from the effects of antitoxin, and 4 in which diphtheria was excluded, but the children nevertheless succumbed. He concludes that in a certain definite number of cases, not limited to individuals suffering from diphtheria, the injection of antitoxic serum has been rapidly followed by fatal collapse. He believes that despite the large number of cases which recover without any after-symptom, the fatal instances show diphtheria, antitoxin is a more or less dangerous remedy, often leading to the symptoms of poisoning by fibrin ferment. He also believes that the proportionate danger is greater than that with chloroform, since the latter is, at any rate, certain in its action, whereas the serum often fails altogether, while its immunizing power is most variable. [Gottstein's conclusions and statistics must be accepted *cum grano salis*, as their collation were instigated by the Langerhaus' case. It will be recalled that Langerhaus, a teacher in the Berlin Faculty of Medicine, lost a child from diphtheria, who underwent treatment with antitoxin.—A. A.]

The Treatment of Tabes.—PROF. W. ERB, treats this subject in a masterly monograph: Our knowledge of the pathological anatomy of tabes admits of no scientific basis for treatment. Regarding the etiology of tabes, we are more positive now than ever before. The chief cause of the disease, without question, is syphilis. Erb cites 200 recent cases of tabes, which have come under his observation, with relation to syphilis as a causal factor. Of these 200 cases are found: (*a*) Cases without a history of syphilitic infection, 15=7.5 per cent. (*b*) Cases with syphilitic infection, 185=92.5 per cent. Of the latter, 103=61.5 per cent. showed certain secondary symptoms, whereas 62=31 per cent. presented a history of the primary sore only. Of the 200 cases, analyzed with reference to objective symptoms independent of the negative evidence of the patients, only 2 per cent. of the cases could be regarded as devoid of syphilitic infection. Together with syphilis, there are other factors concerned in the etiology of tabes, viz: Exposure, excessive exercise, sexual excesses, traumatism, misuse of alcohol and tobacco, excessive mental activity, and a neuropathic disposition. In the prophylaxis of tabes, an early and thorough treatment of syphilis is the most important indication. Statistics in support of this statement by Erb are more cogent than all the verbiage which may be adduced. The statistics are quoted from Fournier (*Gaz. Hebdomad. de Med. et de Chir.*); 321 cases of tabes are cited with a syphilitic history; 24 in which no treatment for syphilis was instituted, 70 in which the treatment was incomplete, 108 in which treatment with Hg. lasted from 3 to 6 months; 74, treatment lasted from ½ to 1 year; 32, treatment lasted from 1 to 2 years; 13, treatment lasted from 2 to 4 years. The remaining indications in the prophylactic treatment of tabes are to inhibit the other factors involved in the etiology of the affection. According to the present method of reasoning, tabes is a toxic degenerative affection derived from products of syphilitic virus (syphilotoxines). In tabetics with a previous history of syphilitic infection, an antisyphilitic treatment is indicated. In a large number of cases, decided benefit is secured by antisyphilitic medication. The statement frequently encountered, that mercury and iodide of potash are dangerous in tabes, is without a substantial foundation. A specific treatment of tabes is indicated as follows: (1) In all recent cases, in the beginning stages. (2) In all cases when syphilitic manifestations are present. (3) In all cases which have previously been insufficiently treated for syphilis. An antisyphilitic treatment is contraindicated in advanced cases, in cachectic and dyspeptic individuals, and in those who show an intolerance to mercury and iodide of potash. The method of treatment is not always a matter of indifference. Erb believes that mercury does more good than the iodide, and furthermore, that the use of mercury by inunction is the best mode of introduction into the body. He deprecates the internal use of mercury and its introduction hypodermically. The *indicatio morbi*, *i. e.*, the treatment of the disease itself, is achieved variously. Whatever the remedy employed, the essential object is to improve the nutrition of the nervous system. The patients should live a quiet, inactive life; physical and mental exertion must be inhibited, and moderation exercised in eating and drinking. The sexual functions must, above all things, be controlled. Drugs are of little value. Nitrate of silver is, perhaps, in a small percentage of cases, of some value. The use of ergot, so highly extolled by Charcot, has been of little value to Erb. Arsenic has been highly recommended by English observers, although he has found no decided results from its use. He believes that strychnine, administered hypodermically is of decided value. He hesitates in explaining its mode of action. Balneotherapy. hydrotherapy, galvanism, gymnastics, massage, nerve-stretching and suspension, are presented as methods of treatment. The author then refers to the treatment of the ataxia, which of late has attracted some attention. It is without doubt, that ataxia can, in a measure, be compensated by energetic influence of the will on the muscles, concentration of attention on the movements, exercise of movements under control of the eyes, etc We are all capable of making our muscular movements stronger and more exact To Fraenkel we owe the introduction of methods, which have for their object, the improvement of the tabetic ataxia. His methods enable the tabetic to conduct his muscular movements with certainty and exactitude. To attain these results in the lower extremities, simple movements are practised by the patient, such as flexion, extension, abduction, and adduction. After awhile the patient attempts with the toes to touch definite points on the other extremitv. Still later, more complicated movements are performed, such as the construction of geometrical figures and designs of various kinds, by the affected extremities. Later, the patient attempts sitting, standing, and walking, with the eyes closed and without the aid of a support. All these movements are at first quite fatiguing to the patient, but they must be conducted systematically under control of the physician. It is very surprising to note how much good is accomplished by the method of Fraenkel. Patients who have been hopelessly atactic, soon learn to forsake, not only their attendant, but also their canes. Regarding the treatment of the impotency of tabetics, Erb cautions us not to reawaken the sexual functions, as their use only intensifies the disease. For the pollutions he gives the bromides. For the bladder disturbances he notes good results from the suspension treatment.—*Sammlung klin. Vorträge.*

The Serum Reaction in the Diagnosis of Typhoid Fever.—JOHNSON and MCTAGGART present the results of their examination of the blood serum of more than 500 patients with reference to presence or absence of the "clump reaction;" *i. e.*, the property which the blood serum of typhoid fever cases has of causing typhoid bacilli to lose their motility and aggregate in "clumps" or agglutinate when a small portion of it is mixed with a fluid containing the living typhoid bacilli. Of 129 cases which were regarded as typhoid fever, only one apparently genuine case of severe typhoid fever was met with, which, when examined under satisfactory conditions, did not give a decided reaction from the dried blood. Only occasionally did the investigators find the first appearance of the reaction delayed beyond the first week. They have never met with a well marked reaction in any one of the 500 cases, where there were not cogent reasons for believing typhoid fever to be present. In the few cases where a clinical diagnosis is impossible, owing to the mild type of the fever, they believe that a bacteriological examination of the stool or of the spleen by puncture to be a justified method of procedure. With reference to the relative value of the dried blood as compared with the fresh serum, they report that they have not yet met with a case of typhoid fever where a decided reaction was obtained with the latter and not with the former. The reaction, though specific in degree, is now conceded to be quantitative; and small amounts of agglutinative substances are admitted to be present in varying amounts in bloods other than those of typhoid fever cases, although these specific substances are an hundred-fold more abundant in the blood of typhoid fever. It is their experience that the use of fresh cultures in bouillon from stock cultures, which have been under cultivation for some time, grown at room temperature, and transplanted at intervals of one month, are the best to employ, for the reason that the bacilli of such cultures seem to be much less sensitive to the small amounts of agglutinative substances, which may be accidentally present, than bacilli from cultures which have been made active by frequent transplantation and cultivation in the incubator. They have also learned that the dried blood is more powerful than the fresh serum in causing the clumping, but not so potent in causing the stoppage of motility. Bacilli which show darting movements in the hanging drop, are too sensitive for the test with the dried blood.—*Montreal Medical Journal*, March, 1897.

MENTAL DISEASES AND MEDICAL JURISPRUDENCE.

By A. W. HOISHOLT, M.D., Assistant Physician, State Asylum for Insane, Stockton, Cal.

De la Demorphinisation Chemique.—PROF. ERLENMEYER has, in a recent article, published in *Le Progrès Médical*, given a resume of his method of rapid demorphinisation, which first appeared in Penzoldt and Stintzing's large work on the special therapy of internal diseases. His method is entirely chemical, and is based upon the fact that hyperacidity of the stomach immediately ensues when morphinists are suddenly and completely deprived of the drug. While the habitue is taking morphine, an acidity of the stomach is present, and morphine is found in the stomach, even in cases in which the drug was only taken hypodermically, and then to the extent of one-half the dose, undergoing here changes of a chemical nature. Prof. Erlenmeyer claims to have obtained very much better results with the rapid than with the gradual withdrawal of the morphine. By following the plan of overcoming the hyperacidity of the gastric contents, he has even avoided the so-called "abstinence" symptoms. He neutralizes the hyperacidity by strong solutions of bicarbonate of soda in the form of Fachinger water, which is given in quantities of one litre *per diem.* In none of the cases treated were disagreeable symptoms observed; there was no nausea, vomiting, colic, or pains in the back and legs, etc., and instead of the usual diarrhea, constipation was present Reflex nervous symptoms were also absent. The writer does not consider washing-out the stomach necessary in the treatment of these cases when alkaline waters are used. Fachinger water is said to contain about 60 per cent. of the amount of bicarbonate of soda present in Vichy water, but there seems to be no reason why the plain bicarbonate in pure water should not be used. The method of Erlenmeyer is simple and apparently effective, without producing the usual distress experienced by the gradual withdrawal of the drug, but like other modes of treatment it offers only temporary relief from the morphine habit.—*Progrès Médical—Journal Nervous and Mental Disease*, December, 1896.

On Chloralose in Delirium Tremens.—DR. L. HASCOVEC reports that he has had very good results from the use of chloralose in acute alcoholism. The patients were given the drug in doses of 0.6 gm. (9 grains), which put them to sleep, and on waking they were free from delirium, and soon recovered. The author considers chloralose preferable to chloral, because the former has absolutely no injurious effect on the heart.—*Compt. Rend. de la Soc. de Biologie—Dublin Journal Medical Science*, December, 1896.

The Removal of a Large Number of Foreign Substances from the Stomach of an Insane.—DR. FRICKER, of Odessa, recently performed a laparotomy in a case of insanity of a woman 32 years of age. He found in the stomach the following substances: 1 key, 2 teaspoons, 1 fork, 2 hair pins, 12 pieces of glass, 1 window-hook, 1 pen, 9 sewing needles, 1 crochet needle, etc., in all 37 different substances. The crochet needle had perforated the wall of the stomach and formed an abscess in front of the latter. The patient had in the course of 1⅓ years swallowed the above objects, besides a number of others which had successfully passed through the entire intestinal tract. The patient recovered. The writer has examined the literature of gastrotomy for the removal of foreign substances, and found that in 19 cases performed in pre-antiseptic times 15 recovered; in 35 cases performed since antisepsis was introduced, 29 recovered—a difference which is not great.—*Hospitalstidende*, January 27, '97.

The Magnan Symptom of Chronic Cocainism.—PROF. MAGNAN has directed attention to a very characteristic symptom presented by individuals suffering from chronic cocainism. The symptom consists of hallucinations connected with general sensation, the patient feeling foreign substances under the skin, in the shape of fine more or less regularly round bodies. Dr. Rybakoff reports recently that he has had an opportunity to verify the phenomenon in two cases of chronic cocainism. In one of the cases the foreign bodies appeared to the patient to be constantly changing position, sometimes being felt as small balls, sometimes as small kernels, fine powder or the finest dust. The symptom is of especial interest, as it is probably only to be found in cases of cocaine-poisoning, and as it is the only symptom not present in other forms of intoxication. The hallucinations frequently lead to ideas that under the skin are found microbes, worms, cocaine crystals, etc. On account of its frequent application in surgery, the use of cocaine is apt to lead to intoxication, and it is therefore well to be on the look-out for this symptom, so that if the latter should present itself, the use of the drug may be discontinued, and thus lead to the prevention of other and more dangerous symptoms. The reason that the symptom has hitherto been but little noticed, is probably due to the circumstance that the physician not infrequently finds the patient in a condition of hallucinatory confusion in which it is impossible to get reliable answers to questions, and because the symptoms bother the patient very little, and he finds it unnecessary to report it to his physician. The diagnostic importance of the symptom was emphasized in a case reported by Prof. Korsakoff. His patient was suffering from multiple neuritis and complained constantly that she felt worms under the skin. The use of cocaine was therefore inquired into, and it was ascertained that she was being treated gynecologically with vaginal tampons soaked in a solution of cocaine. When this treatment was discontinued, she ceased to complain.—*Neurol. Centralblatt—Hospitalstidende.*

Criminal Responsibility in the Insane.—At a meeting of the Royal Academy of Medicine in Ireland, DR. CONOLLY NORMAN read a paper on this subject in which he pointed out the injustice and absurdity of the supposed legal tests of responsibility, as applied to the insane, since a strict application of the criteria of knowledge of the nature of the act done or of knowledge of right from wrong would lead to all the insane being held responsible, with the exception of low-class idiots and a few acute cases. Dr. Norman did not, however, at the present time think it advisable to substitute medical for legal definitions in this matter. Our knowledge of insanity, he says, is still so limited that we can not define its conditions, and to endeavor to define that which is indefinable is to risk repeating the mischief already done and laying down criteria, the validity of which will soon be as indisputable as that of the former ones. Owing to a variety of circumstances the speaker did not, however, think that much, if any, practical injustice was done under the present state of the law, however unjustifiable it may be theoretically. In speaking of "irresistible impulse," Dr. Norman said he did not doubt that such a thing existed, but considered it a term too freely used by medical men. The word, impulse, he said, is rather vague, and it is impossible to say what is irresistible, because it is known only to the man to whom the impulse occurred. It is better to look out for other signs of insanity than irresistible impulse. He thought the question of a criminal being insane should be left to the jury to decide. A question of life or death should not be left to a single expert or body of experts. It is often difficult for the medical witnesses to give evidence satisfactory to the court, as one judge wants nothing but facts, while another wants one's opinions. The law regarding a lunatic giving evidence is much the same as that of a lunatic making a will. He can give evidence if he understands the nature of an oath and if he has no delusions on the point at issue. He can make a will if his memory is sound and in case he has no delusions which refer to his relatives or others that might be benefited by the will.—*Dublin Journal of Medical Science*, December, 1896.

FORMULÆ.

By H. E. SANDERSON, Ph.B., M.D., Assistant Physician State Asylum for Insane, Stockton, Cal.

Acute Coryza.—WUNCHE commends the following:

Menthol.	ʒss
Chloroformi	ʒv

Sig.—Inhale four or five drops, rubbed on to palms of hands, several times a day.—*Therap. Monatschefte.*

Other simple remedies are:

Alum	1 part
Sugar	10 parts

Sig.—Snuff; use several times daily for a "fresh cold."

Camphor	
Sugar	Equal parts.

Sig.—Snuff; use every two hours for a "fresh cold."

Methylene Blue for Headache.—LEWY advocates in the *Berl. klin. Wochenschr.* the use of methylene blue in doses of one or two grains (in capsules) as curative; especially in neurasthenia and migraine.—*Medical News.*

Nitrate of Potassium for Burns.—POGGI recommends the use of a saturated solution of potassium nitrate for burns of all degrees.—*Thése de Paris.—Medical Record.*

Ointment for Pustular Acne:

Bismuth subnitrate.	
White precipitate.	
Ichthyol	of each 2 parts
Vaseline	20 parts

Sig.—External use.—*Rev. Internat. de Med. and de Chirg.—Medical and Surgical Reporter.*

Lotion for Pityriasis Versicolor:

Corrosive sublimate	1 part
Oil of lavender	4 parts
Tinct. of lavender	120 parts
Green soap	80 parts

Sig.—Apply and let it dry; wash off in three days.—*Concours Médical.—New York Medical Journal.*

Local Treatment of Gout:

Potassi. iodidi.	
Liniment. saponis	āā ℥ss
Olei cajeputi.	
Olei carni	āā ʒss
Spirit. rectif.	*q.s. ad.* ℥vii

S.—Apply on lint, and cover with protective.—*Lancet.*—*Medical Record.*

Rabinscheck's Treatment of Pertussis.—Introduce a small tampon (into the back of the mouth) saturated with 1:1000 corrosive sublimate solution, and press it against the lower part of the tongue so as to bathe the epiglottis and neighboring mucous membrane. Apply once a day.—*New York Medical Journal.*—*American Practitioner and News.*

External Use of Pilocarpine in Nephritis.—*Lyon Medical* refers to the experience of MOLLIÈRE in 1894, at the Hotel-Dieu, who used pilocarpin by friction of the whole dorso-lumbar region, with the following:

Nitrate of pilocarpine	gr. ¾ to 1½
Vaseline	ounces 3

Use once a day and cover part with cotton.—*Medical Review.*

PUBLIC HEALTH.

By W. R. CLUNESS, M.A., M.D., San Francisco, Cal.

Mortality for February, 1897.—The deaths registered in 52 town districts of the State, during the month of February, in a population of 749,530, correspond to an annual rate of 15.84 a thousand, the total mortality having been 989. 58 deaths were due to zymotic diseases, giving an annual rate of .92 a thousand. Of these, 5 were due to diphtheria, 1 to cholera infantum, 12 to typhoid fever, 2 to diarrhea and dysentery, 8 to cerebro-spinal fever, 3 to whooping cough, 9 to croup, 2 to intermittent and remittent fevers, 0 to scarlet fever, 16 to measles, and 0 to small-pox. 286 deaths resulted from diseases of the respiratory organs, giving an annual rate of 4.56 a thousand. Of these, 150 were due to consumption, 100 to pneumonia, 30 to bronchitis, and 6 to pulmonary congestion; the rate being, for consumption and pneumonia, 2.40 and 1.59, respectively. 105 deaths resulted from diseases of the heart, 10 from alcoholism, 2 from erysipelas, 48 from cancer, and 400 from causes not given. The average annual death rate from all causes occurring in the ten largest cities and towns in the State, and representing a population of 618,000, was 16.08. The highest rate for the month occurring in cities having a population of 10,000 or more inhabitants, was reported from San Francisco, the lowest from San Diego.

METEOROLOGY.

Summary for February, 1897.—*Temperature.*—The normal temperature of the State for February is 48.8°; the average for Febuary, 1897, was 48.0°, a departure from the normal of -0.8°. The highest monthly mean was 65.4°, at Ogilby; the lowest, 18.0°, at Bodie. The maximum temperature was 97°, at Volcano Springs, on the 28th. The minimum, 24° below zero, at Bodie, on the 23d. The absolute range for the State was 121°. The greatest monthly range was 66°, at Bodie; the least, 22°, at Point Reyes.

Rainfall.—The normal precipitation for the State for February is 3.56 inches; the average for February, 1897, was 5.85 inches, a departure from the normal of +1.29 inches. The greatest monthly precipitation was 20.14 inches, at Morse's House, Sierra Madre range of mountains; the least, nothing, at Ogilby, Palm Springs and Volcano Springs.

Wind.—The prevailing direction of wind was W. S.W.

Unusual Features.—The unusual meteorological phenomenon was the excessive rainfall in Southern California, as compared with that of the northern portion of the State.—JAMES A. BARWICK, Director California Weather Service.

California—Tabular Statement for February, 1897.

STATIONS.	TEMPERATURE.						RAINFALL.		Mean Relative Humidity	WEATHER.			WIND.	FURNISHED BY—
	Mean	Highest	Lowest	Mean Highest	Mean Lowest	Mean Daily Range	No of Days Rain Fell	Total Rainfall		No. of Clear Days	No. of Fair Days	No. of Cloudy Days	Prevailing Direction.	
Auburn..........Cal.	45.0	70	30	----	----	----	---	11.40	----	---	---	---	S.W.	Southern Pacific Company.
Berkeley......... "	49.0	64	35	54	44	10.0	12	4.68	89	7	9	12	S.E.	Obs. University of California.
Colfax............ "	45.0	70	30	----	----	----	---	15.96	----	---	---	---	S E.	Southern Pacific Company.
Coronado........ "	62.0	83	45	71	53	18.0	9	2.72	72	14	2	12	W.	Hotel del Coronado.
Eureka........... "	47.0	58	31	53	41	12.0	20	11.23	87	5	9	14	S E.	Weather Bureau Dept. Agr.
Fresno........... "	49.0	73	31	58	41	17.0	14	2.65	77	12	6	10	N.W.	" " "
Keeler............ "	47.0	73	33	----	----	----	---	0.27	----	---	---	---	S.	" " "
Los Angeles.... "	53.0	83	35	62	44	18.0	9	5.62	74	11	11	6	W.	" " "
Monterey .... "	52.0	66	32	----	----	----	---	3.63	----	---	---	---	S.	Southern Pacific Company.
Napa............ "	49.0	72	30	59	40	19.0	16	5.68	87	11	7	10	S.W.	Station Napa Insane Asylum.
Oakland......... "	49.0	68	33	55	42	13.0	13	5.99	83	8	12	8	S.W.	Chabot Observatory.
Paso Robles.... "	48.0	70	31	57	40	17.0	9	4.18	----	9	9	10	S S W.	Agr. Experimental Station.
Red Bluff....... "	47.0	72	31	54	40	14.0	13	6.26	76	10	5	13	S.E.	Weather Bureau Dept. Agr.
Sacramento. ... "	49.0	66	24	55	43	12.0	13	4.15	70*	7	10	11	S.E.	" " "
San Bernardino "	50.0	78	27	60	39	21.0	10	5.40	----	12	9	7	S.W.	A. K. Johnson, M. D
San Diego. ...... "	55.0	76	38	62	48	14.0	9	2.72	72	14	2	12	W.	Weather Bureau Dept. Agr.
San Francisco.. "	51.0	66	38	55	46	9.0	17	4.41	79	7	12	9	W.	" " "
Santa Barbara.. "	53.0	75	33	62	44	18.0	6	3.65	69	17	5	6	W.	Hugh D. Vail.
Santa Cruz...... "	50.0	75	30	61	40	21.0	14	4.96	----	13	4	11	W.SW.	W. R. Springer.
Yuma...........A. T.	57.0	83	37	69	46	23.0	45	0.06	45	15	10	3	W.	Weather Bureau Dept. Agr.

Blank (----) indicates data missing.

* means humidity at 5 P. M.

Occidental Medical Times.

COMMUNICATIONS are invited from all parts of the world. When necessary to elucidate the text, illustrations will be furnished without cost to the author.

SACRAMENTO: APRIL, 1897

CALIFORNIA NORTHERN DISTRICT MEDICAL SOCIETY.

The seventh semi-annual meeting of the California Northern District Medical Society, held at Auburn on Tuesday, March 9th, was, in a sense, an innovation. It was the first meeting that has been held in new territory and off the main line of travel in the District, that is, from north to south. That it was successful will be an encouragement to hold occasional meetings in some of the smaller towns which the Society has not yet visited. It is only in this manner that missionary work in medical society matters can be conducted, and no stimulation to organization is better than the presence of the Society itself.

The pretty foot-hill town of Auburn has for many years had a well deserved reputation as a resort for cases of pulmonary trouble. The climatic resources of the foot-hill belt in Northern and Central California have been but little exploited, and it needs work of a practical and systematic manner to accumulate facts and figures which shall be helpful to the profession in all parts of the State, and elsewhere, when estimating the value of this particular region for cases under their charge. DR. R. F. ROONEY, who on this occasion was chairman of the committee of arrangements, has done something in this direction, and it would be well for others practising in the same region to supplement his efforts.

While there was no lack of interest in the proceedings, the number of papers was less than the program indicated. Early in its organization the Society decided that failure to read a paper when the author had been designated so to do by the President, and when he had accepted the task, was punishable by a substantial fine. This by-law has always been enforced, but its enforcement should not be necessary. In the first place, papers should always be finished some weeks in advance of the meeting. It is hardly creditable to the

Society that any member should allow five months to elapse before taking up this work. The paper, once finished, should be promptly forwarded to the secretary or to the chairman of the committee of arrangements, when, should the author be unable to attend, as will often happen at the last moment, the paper can be read and discussed by those present. In the limited time afforded by a one day meeting only a certain number of papers can be received, but should several of these fail to materialize, an unpleasant gap in the proceedings results.

The Society has taken an important step in the change of the date of its meetings to June and November. The next annual meeting will therefore be held in November, 1897, and the semi-annual meeting of 1898 will be held in June. It remains to be seen whether this change will prove an advantageous one. The attendance at the semi-annual meetings in March has always been small, particularly so when contrasted with that of the annual meetings in October. This has been ascribed to the proximity of the State Society meeting in April, and it is believed that the change to the later month of June will result in larger gatherings as well as enabling the Society to meet in many places that are not accessable earlier in the year.

Like all of the smaller meetings, this was a particularly pleasant one, and the entertainment given by the Placer County Medical Society at the close of the evening session was so thoroughly enjoyable as to make one refrain, for the time being, from advocating the abolition of these social reunions.

NOTES.

The Lane Medical Lectures.

The second course of the Lane Medical Lectures will be given by Christopher Heath, late President of the Royal College of Surgeons, England, in next September, in Cooper Medical College, San Francisco, commencing September 18th. Mr. Heath will lecture twice daily, viz: at 11 o'clock in the forenoon, and at 8 o'clock in the evening. The following is a list of the subjects: Two lectures on Congenital Malformations; two on Diseases of the Rectum; two on Diseases of the Jaws; one on Diseases of the Tongue; one on Diseases of the joints; one on Aneurism. The closing lecture will be on "A Century of Surgery." These lectures are intended only for graduates of regular medicine, to whom an invitation to attend them is herewith extended by the founder, L. C. Lane, President of Cooper Medical College.

The Semi-Centennial Meeting of the American Medical Association.

"The semi-centennial meeting of the American Medical Association, which will be held in Philadelphia on the 1st, 2d, 3d, and 4th of June, 1897, bids fair to surpass in the character of the entertainment, the scientific papers, and the number in attendance any meeting which has heretofore been held. The committee in charge have been able to obtain large and roomy places of meeting for the general meetings and the section meetings, all within a single block and within very short walking distance or immediately adjacent to the largest and most comfortable of the Philadelphia hotels. For the week preceding and following the meeting the Committee of Arrangements have also arranged for clinical courses, which will be open without charge to all physicians who may visit the city at that time. These courses cover every branch in medicine and its specialties, and will afford visitors the opportunity of seeing the active clinical work of all the great teachers of Philadelphia, which is now, as it has been for so many years in the past, in every respect the medical center of the United States."

The Medical Association of the District of Columbia and Charity Practice

The following recommendations were adopted by the Medical Association of the District of Columbia, February 16, 1897: "(1) That every institution for medical charity shall require from every applicant for relief in a hospital or dispensary, a written certificate, to be obtained as hereinafter provided. Emergency cases are to be excepted from the operation of this rule. (2) That such certificate be obtained from Physicians to the Poor, the Board of Associated Charities, and any registered physician. (3) That cases of sick and injured persons found upon the streets, in the stations, or elsewhere, who require immediate treatment, shall be carried to the Emergency Hospital, or the nearest hospital having an emergency service, or to their homes, if so directed by the patient or his friends. (4) That emergency patients shall not be detained longer in such institutions than the necessity of the case imperatively demands, but shall be discharged from the service and sent to their homes or to some public hospital, as the patient may elect. (5) That members of this Association shall be entitled to the privilege of attending private persons occupying private rooms in any of the public hospitals of this city. (6) That in future the members of the Medical Staff of

Hospitals, when attending medical or surgical cases in private pay-rooms, shall insist upon proper payment for their services, except in the case of such patients who are clearly unable to pay for same. (7) That whenever the Medical Staff, or a majority thereof, of a hospital or dispensary resigns, and, when after due hearing, this Association finds that the resignations were for just and sufficient cause, it shall be forbidden for any member of this Association to accept a position on the staff of said hospital or dispensary. (8) That whenever one or more members of the Medical Staff of a hospital or dispensary are dismissed, and when, after due investigation, this Association finds that such dismissal was without just and sufficient cause, it shall be forbidden for any member of this Association to fill the vacancy created thereby. (9) That complaints made under Rules 7 and 8 shall be made in writing to the Standing Committee, which, after due consideration, shall report its findings to the Association." This action by the Association shows the drift in professional sentiment to which we have frequently alluded of late.

SOCIETY PROCEEDINGS.

SACRAMENTO SOCIETY FOR MEDICAL IMPROVEMENT.

Regular Meeting, February 16, 1897.

The President, F. B. SUTLIFF, M.D., in the Chair.

New Member.—CHAS. D. MCGETTIGAN, M.D., was duly elected a member of the Society.

Medical Legislation.—THOS. ROSS, F. GUNDRUM, and W. F. WIARD were appointed a committee to coöperate with the Committee on Medical Legislation of the State Society in connection with all matters of legislation affecting the welfare of the profession that might be brought before the Legislature.

Affiliation with the State Society.—A communication was received from the Medical Society of the State of California requesting the views of the Society upon the question of affiliation with the State organization on a financial basis. After some discussion, the trend of which was in opposition to the proposal, the communication was ordered placed on file.

Lobar Pneumonia and its Treatment.—DR. F. D. TYRRELL read a short paper upon this subject, which he hoped would elicit a general discussion, especially on the relative merits of the various local applications advised in this disease. He said: Pneumonia is a self-limited disease, and a thorough knowledge of the pathological stages was essential to rational treatment. In connection with causation, alcoholics are more susceptible than those of temperate habits. Again, the subjects of surgical operations, or of traumatisms, are very prone to attack. The speaker then briefly reviewed the pathology of the different stages, and, taking up their treatment, said: In the first stage, with a strong plethoric patient with a full bounding pulse, aconite is indicated. If restless, nervous, and coughing, with an accompanying pleurisy, opium, in some form, preferably codein, may be used to advantage, proper caution being observed in its administration. Poultices are a nuisance. With a temperature of 102° F. or more, the application of cold, either in the form of an ice bag or cold sponging, is desirable; and patients who may object to it at first are usually anxious for the early repetition of the sponging when they realize the benefit derived from it. The coal-tar products are of great benefit in reducing temperature, but being heart depressants, safer means of reducing temperature must be resorted to in this disease. In old alcoholics stimulation must be used from the first in order to prevent delirium. In the second stage of the disease, treatment will be directed principally to the high temperature and the overworked heart. For the former we can use cold applications, and for the latter alcohol and strychnine, with nitro-glycerine if there be much cyanosis. Digitalis, caffein, and ammonia, though largely used, rank second to the foregoing remedies. Throughout the disease the diet should be nutritious, and the intestinal tract should be kept clear For this purpose calomel, in small doses, frequently repeated, will not only act as a mild laxative, but will also arrest any gastric irritability that may be present.

Dr. H. L. Nichols: I am opposed to poultices. In certain cases a favorite plan of mine is cotton, applied over the chest. In plethoric patients a little blood-letting is excellent; it will reduce temperature. The suggestions, as given, are all good.

Dr. J. H. Parkinson: I agree with the author and with the last speaker in regard to the use of poultices. In my experience, however, a hot application to relieve the pain caused by the accompanying pleurisy is very grateful, but that can be accomplished by the hot water bag I thought Dr. Nichols would say something more on the subject of blood-letting, one I know very little about. I confess to feeling an inability to recognize the exact type in which it would be indicated, and I should hesitate to bleed a pneumonic patient, feeling that I am without experience as regards blood-letting. Regarding the use of depressants in this form of pneumonia, the proper thing is to maintain the heart's action, as death seems generally to come from that side. For that reason the coal-tar products must be used cautiously. Opium, of course, will always be needed.

Dr. F. R. Waggoner: I always commence on the first day to prepare for the tenth day, or the crisis, as in the latter days we expect heart failure and collapse. My treatment has been to sustain the patient by nourishment and stimulation. As to controlling the fever, I have paid but little attention to it, and but little to blood-letting. I adopted a plan a number of years ago of putting the lung in a sling which I have done by bandaging. I always put on a wide strong bandage around the thorax, thus putting the lung as near at rest as possible. If there is a pleuritic complication it will give ease that a person can hardly conceive. I have frequently noticed in cases of acute pleuritic inflammation that the patients will try to support the side with both hands, until they become almost exhausted before they relax their efforts. A strong bandage will furnish that support and put the patient at rest. Dr. Geering, of St. Louis, is the author of the treatment.

Dr. H. H. Look: In regard to pneumonia, I agree with Dr. Waggoner, in looking out for the tenth day of the disease. If you can aid and lower the action of the fatigued heart, the better will be the show for recovery. Give a good dose of calomel and a little phenacetin when the heart is bounding in the first stages of the disease. I have never seen ill effects from it. I have seen congestion of the lung relieved, the comfort of the patient restored, and the heart's action reduced. I like poultices. I heard the remark made to-night that it gives some trouble to poultice. I never take that into consideration. We have nurses for that purpose, and a little work, more or less, makes no difference. I use mustard in the first stages and follow with a hot water bag or flaxseed poultices, which I keep up steadily. When the heart begins to fail I give digitalis. It seems to be a heart food, and is permanent in its effects. Strychnine and nitro-glycerine only stimulate for the time being, and must be continued the same as alcohol. I use digitalis and have had good results with it.

Dr. H. D'Arcy Power: In the main I agree with Dr. Waggoner. I am more and more convinced that the great danger against which the defence has to be concentrated is heart failure at any stage, and general exhaustion during the period of resolution. For this reason I have long given up the use of aconite and veratrum, and pin my faith to sustaining measures. In regard to treatment with cold I have never used it, for the reason that the results obtained do not sufficiently offset the serious theoretical objections to its use.

To contract the peripheral arterioles, and dam back more blood into an already congested organ, can only be justified by the most definite success in practice. I prefer the use of moist heat as obtained by moist lint and the hot water coil, whereby the temperature can be regulated. The coal-tar products I believe to be contraindicated; they all tend to diminish oxidation. As to digitalis, it has its value, though it cannot be correctly called a heart food; it only affects the nutrition of the heart by giving it rest. Not so with strychnine, which directly contributes to nutrition by increasing leucocytosis. We have in it the most valuable of all remedies in pneumonia; and I use it as long as there is any danger of the heart giving out, and generally in conjunction with carbonate of ammonium. Finally, there is the question of blood-letting. I am convinced that the first stage of pneumonia is often of more serious import than is generally conceived, and that cases occasionally die therein without a diagnosis having been made. Two cases within my recent experience will illustrate the point. In the first case a powerful man of middle age had been subjected to a trifling operation on the urethra, followed 12 hours later by a severe rigor and a rise of temperature; the following day his heart became feeble and his skin cyanotic. The attendant surgeon failing to find any physical signs, naturally attributed his condition to nervous shock consequent on the urethral operation. On the following day, when the patient was apparently moribund, I was called in consultation. After prolonged examination I fancied I detected slight crepitus at both bases and less than the normal resonance over both lungs. Thereon I risked a diagnosis of heart failure due to blood stasis as the result of the first stage of pneumonia, and advised phlebotomy. The patient was at the time pulseless and comatose. Fifteen ounces of blood were withdrawn, with the result that the patient immediately rallied, and became conscious. Within 24 hours the diagnosis was verified by the full development of consolidation in both lungs, and the patient ultimately died therefrom. A few weeks ago I had a case, very similar in its symptoms, treatment, and results. In these cases had the diagnosis been delayed but a few hours, death would have resulted without its cause being apparent. It is under such conditions that I believe blood-letting to be imperatively called for; were it more commonly practised, pneumonia would not have its present mortality.

DR. F. GUNDRUM: I apply cold generally and locally. Compresses wrung out of cold or ice water, or the ice poultice over the inflamed side, or all round the thorax. I thus reduce temperature, get the general tonic effects on the system, but especially on the cardiac and respiratory centers, and by the local application of ice poultices, or compresses wrung out of ice water, thoroughly used, we can very largely control the congestion and diapedesis of the inflamed lung. Dr. Power thinks this will produce congestion of the lung, but the doctor's ideas are not sustained by experimental facts. It has been shown experimentally, that the temperature in the lung can be reduced many degrees, sufficient to contract the capillaries. Another effect of the local use of cold is its analgesic action. It soon stops pain and renders the patient comfortable. A good dose of calomel, if the system is much vitiated, will clear the field for the action of other remedies. I believe in the use of digitalis from the beginning to the end. Belladonna is sometimes very useful in the early stage, to open the cutaneous capillaries. In sthenic and fairly sthenic cases, I believe we have invaluable remedies in veratrum viride and antimony, until the stage of diapedesis is completed. Quinine is a valuable tonic in this disease. Strychnine is a valuable remedy, but, like many another remedy, it is used too much. I look upon it as a remedy to be reserved for an emergency. It is a wonderful stimulant to the respiratory and cardiac centers.

DR. G. L. SIMMONS: When I got the notice that the subject of Dr. Tyrrell's paper was pneumonia, I also received the monthly report of the State Board of Health, and in looking over the statistics in the last named document, I was struck with the fact that Sacramento has a most fearful record in this disease for that period of time. The table shows that our whole mortality in January is 48, of which 11 are reported to have died of pneumonia, and 1 of congestion of the lungs, probably pneumonic in character. If this be true, 25 per cent., or one-fourth of all our deaths may be ascribed to this disease, a rate greatly in excess of that of any other city in the State. I do not remember such a record as that and I am sure it may well be called *fearful*. Whether medical treatment of any kind could have averted such a result may be a question; but when I hear our members advocate the use of opiates, or the coal-tar products, or other depressants, I begin to fear that we may be medicating in the wrong direction. With the considerable experience I have had, I still believe in the supporting plan of treatment and for medication, rely more particularly upon the use of digitalis, strychnine, and small doses of quinine, with such hot applications to the chest as are found to be most satisfactory to the patient.

DR. C. O. CARTWRIGHT: I agree with Dr. Power in his remarks regarding cold applications in pneumonia. I use veratrum to control the heart. I also use carbonate of ammonia and quinine from first to last, when needed.

DR. L. A. HARCOURT: If you can relieve congestion in 24 hours, you can abort pneumonia. The use of hot applications combined with the coal-tar products, is very satisfactory. In regard to changing poultices every 15 minutes, you could put on a jacket of cotton batting, and by covering with oiled silk, you can make that heat continuous. Blood-letting is serviceable in some cases.

DR. NICHOLS: In answer to Dr. Simmons, as to the large number of deaths from pneumonia, I may say that the cases were mostly elderly people or very young infants. I remarked at a recent meeting of the City Board of Health that, laying aside cases of pneumonia and accidental deaths, our death rate would have been remarkably low.

DR. PARKINSON: The subject of the paper this evening was lobar or croupus pneumonia, and it is quite evident that the mortality in January, to which Dr. Simmons alludes, was not due to croupus pneumonia at all. I had one death in January from pneumonia, but it was catarrhal pneumonia following *la grippe*, and it was so returned. I see quite a number of cases in young children, of catarrhal pneumonia, or, as it is generally called, capillary bronchitis. There is a large mortality from it. In my experience I have seen croupous pneumonia very infrequently. In this city it is not nearly so frequent a disease as the catarrhal variety.

DR. TYRRELL: I want to defend the ice treatment. I was sick in New York for seven weeks with pneumonia, and during that time I was treated with cold applications and stimulants. During the seven weeks of illness the only treatment I received was cold sponging to reduce the temperature, strychnine, and nitro-glycerine. I have been examined for life insurance several times since, and they all passed me. I think it was a good recovery under the ice treatment.

SAN FRANCISCO COUNTY MEDICAL SOCIETY.

Regular Meeting, February 9, 1897.

The President, F. B. CARPENTER, M.D., in the Chair.

New Member.—E. H. HILL, M.D., was duly elected a member of the Society.

Ganglion, with Remarks on Schleich's Method of Infiltration Anesthesia. DR. H. B. A. KUGELER read a paper upon this subject. He said: Formerly the almost universally accepted theory was the one expressed by Billroth in his classic work on "Surgical Pathology." He describes it as a "partial hernial ectasia of the sheath of the tendon, with dropsy." They contain a thick, mucous, vitreous-looking jelly; frequently there are also innumerable white bodies, like melon seeds, which are not organized, but usually consist of pure amorphous fibrin. Volkmann, and later, von Bergmann, insisted that they were genetically connected with the joints, originating from a pouch-like diverticulum of the synovial membrane. In some of the cases operated upon in the surgical clinic of the Dispensary of the Medical Department of the University of California, I have been able to demonstrate this connection with the joint cavity to the students. This point must be carefully borne in mind in operating upon these cases, as any defect in asepsis may lead to serious trouble. Quite recently Falkson has claimed that they arise neither from the joints nor from the tendons, but are of an independent origin. Teichmann has shown that small colloid cysts occur in the neighborhood of the wrist-joint, as a rule, not larger than a pea. These develop into ganglia. This view is shared by Albert, of Vienna. Regarding treatment, Billroth, as late as 1889, is careful to warn against operation, unless it be subcutaneous discision with a tenotome. External applications, iodine, mercury, etc., are of little use. The simplest and oldest method was the "Biblical," *i. e.*, rupture by means of a sharp stroke with some heavy object, the family Bible doing valuable service. This is, however, usually followed by a return. This also happens after subcutaneous discision, especially if there be any quantity of the bodies mentioned above. The surest and safest procedure is free aseptic incision, followed by as complete an extirpation of the ganglion as possible. This operative treatment is entirely devoid of danger, if the rules of asepsis are carefully observed. In this connection, Schleich's method of anesthesia is particularly applicable, as in all minor surgical procedures. The main point in the application is that the injections are made *intra* and not *subcutaneous.* The needle must not be introduced perpendicularly, but as parallel to the skin as possible. To render the first injection painless, ethyl chloride may be used, or simpler still, the skin may be touched with a drop of pure carbolic acid. The needle being properly introduced, a few drops of the solution are injected which produces a wheal. This is perfectly anesthetic, and starting from this other wheals are raised along the line of the proposed incision. The pressure of the fluid itself, along with the slight action of the cocaine and morphine, paralyzes the end terminals of the nerves.

DR. M. KROTOSZYNER: While in Berlin I visited Schleich. He did not show me his method personally, but the German medical papers treated him badly, though recently the professors have taken it up. He uses it in minor as well as in major operations. It is said that he even performs laparotomies under it. I have used it very often, with uniformly good results. The method has its advantages In attempting to remove a small steatoma of the scalp the field was obscured, and the tumor could not be found on account of the infiltration in the deeper tissues. It has but slight action. A few days ago in opening a carbuncle I noticed that, while the first incisions were painless, those deeper down were very painful. This may have been due to the fact that the tissue in and about a carbuncle is dense and not easy of infiltration. I think soon great progress will be made with this method. There is no danger of poisoning, even when large doses are used.

DR. J. H. BARBAT: For local anesthesia I have used ethyl chloride quite freely. Sometimes, especially about the head, its application is attended with much pain. I have used the infiltration method several times, and like it.

DR. G. W. DAVIS: I believe this method to be useful in minor work. As to ethyl chloride, contrary to Dr. Barbat's experience, I have removed three sebaceous tumors from the scalp, one of which was quite large, by this method of anesthesia, and the patient was perfectly satisfied.

DR. C. G. KUHLMAN: As Schleich's solution contains carbolic acid, it is certainly not entirely devoid of danger. Regarding freezing in the production of local anesthesia, I am surprised not to hear other methods than that by ethyl chloride mentioned, such as ice. The infiltration method only anesthetizes the terminal ends of the nerves.

DR. J. D. ARNOLD: I have used Schleich's method in operations for deflection of the sputum and for cleft palate, and find that it is quite successful, even in the mucous membrane. Regarding the pain of the first puncture of the needle, I am surprised not to hear the method of Wolfington mentioned, namely, the placing of a drop of pure carbolic acid upon the skin. This renders it insensible to the needle.

DR. C. E. FARNUM: We should always bear in mind whenever a hypodermic needle is to be used, that we can never be sure it is perfectly clean. We can sterilize the needle, but, even after long immersion, it is doubtful if we can sterilize the syringe.

DR. KUGELER: I do not think it would be advisable to open the abdomen under this method, as there is considerable shock in a laparotomy, and the patient should be completely anesthetized. It can, however, be used for abscesses, tumors, etc., even when of large size.

Foreign Body in the Bladder.—DR. F. J. HUND reported a case of foreign body in the bladder, with the following history: The patient, a man, had placed a small piece of tubing on a catheter, and while using it the tube slipped off and remained in the bladder. When seen, ten days afterwards, he was suffering great pain, with tenesmus. The urgent symptoms were relieved, and two days later, under cocaine anesthesia, the tube was removed by means of a small sized Thompson's lithotrite. It was quite difficult to grasp the foreign body, but it was finally seized near the middle and withdrawn. It is quite interesting to note the rapidity with which incrustation has taken place on the tube.

DR. E. E. KELLY: Speaking of peculiar nuclei, Dr. Chismore, in one of his cases, found in the center of a calculus several pieces of a Swedish newspaper. No history could be obtained as to how the paper entered the bladder. Dr. Chismore uses cocaine very freely, as much as 8 ounces being employed in a single case, in quantities of 12 drachms at a time. The bladder seems slow to absorb it, and he has never had any trouble.

DR. M. KROTOSZYNER said that in 1884, in Berlin, he had seen the cystoscope demonstrated, two ounces of a 4 per cent. solution of cocaine being used. Since then a death upon the table had occurred, and at the date of his last visit, cocaine was not being so lavishly used. The speaker said he generally employed about two ounces of a 4 per cent. solution, and unless there was a lesion of the bladder, absorption was very slow.

DR. C. E. FARNUM: I have seen one case of death following the use of the lithotrite. Six ounces of a 4 per cent. solution of cocaine were used. After crushing the stone and working out the fragments, I noticed that the patient was pallid and faint, and at my request, the operation was stopped. Two weeks later the patient was again operated upon, six ounces of the solution being used. He became extremely faint and exhausted and died three days later. He did not recover completely from the first operation. At the autopsy the heart, lungs, and kidneys were found to be normal. There was slight thickening of the right ureter. There was very little traumatism in the bladder. I always thought that death was due to the cocaine.

DR. J. D. ARNOLD: The question of poisoning by cocaine is a very important one. We should follow Bosworth's plan, as he has had more experience in that line and uses more cocaine than any one else. He advises that a test should be made upon the mucous membrane with a smaller amount to see whether the patient can stand larger quantities. It is not at all uncommon to see a man with a cotton nasal plug moistened with five minims of a 4 per cent. solution faint away. Cocaine should be carefully watched.

Dermoid Cyst of Ovary—Fibroid Uterus—Parovarian Cyst.—DR. H. KREUTZMANN exhibited three specimens, briefly reporting the cases. *Case 1.*—"Dermoid Cyst of Ovary." This cyst, containing a small piece of bone and a mass of hair was removed two weeks ago from a young woman. There was nothing in the history that would indicate a dermoid cyst. The patient was suffering from phthisis. In the speaker's experience, affections of the pulmonary organs are a most formidable contraindication in abdominal surgery. The operation was performed with reluctance and was uncomplicated. Notwithstanding this, a severe pneumonia subsequently developed, the temperature reaching 105° F., with a pulse of 160. The patient recovered from the operation, but the pulmonary trouble has since become worse. *Case 2.*—"Fibroid Uterus." A tumor with the uterus adherent, was removed four days previously from a colored woman, by abdominal hysterectomy. The operation was done in the usual way, namely, ligating the appendages, separating the bladder from the uterus, ligating the uterine arteries, excision of the uterus, and union of the peritoneal flaps. *Case 3.*—"Parovarian Cyst." This cyst, which had been removed that morning, had to be enucleated in its entirety, so a pedicle was formed. The case is interesting from the fact that ten years ago the patient had undergone an ovariotomy, at Buda Pesth, for an ovarian tumor of the other side. Strong adhesions of the pedicle had formed and the ovarian ligament was fastened to a coil of intestines. This adherent band was separated. The case illustrates beautifully the danger of ligating an ovarian pedicle in the usual way, and the great advantage of its retro-peritoneal treatment. In reply to an inquiry, the speaker said the operation had occupied 30 or 40 minutes. The abdomen had to be carefully closed on account of the patient's cough. He had done the operation in eight or nine minutes, and there are men who can do it in four.

DR. CAMPBELL FORD: Time is a considerable factor. Phelps, of New York, excises the knee-joint in fifteen minutes. I have seen an operation for strangulated hernia done in fifteen minutes, and again, have seen it take a couple of hours.

Affiliation with the State Society.—The circular issued by the Committee of Arrangements of the State Society suggesting the affiliation of the local societies with the State Society on the basis of an annual *per capita* subscription of $2 on behalf of each member of the local societies, to be collected and forwarded by the Secretaries of the local societies, came up for consideration. No action was taken, the matter being postponed until the next regular meeting. Amongst the objections raised by the various speakers were the compulsion implied by the proposition, whereby every member of the local society would be compelled to join; the responsibility of the local society for delinquents, and the duplication of payments by those who were members of more than one local society.

Entertainment of the State Society.—The following Committee on Entertainment of the State Society was appointed: J. H. BARBAT, H. B. A. KUGELAR, DUDLEY TAIT, D. W. MONTGOMERY, and H. M. SHERMAN.

CALIFORNIA ACADEMY OF MEDICINE.

Regular Meeting, February 20, 1897.

The President, D. W. MONTGOMERY, M.D., in the Chair.

Epithelioma of Slow Growth.—DR. D. W. MONTGOMERY exhibited a man 82 years of age, suffering with an epithelioma of the floor of the mouth. It had existed for a long time—over 3 years—but had developed more rapidly during the past year. Another peculiarity was that there was very little gland involvement, there being only a nodule in front of the hyoid bone. Microscopical examination demonstrated the existence of carcinoma. The very slow growth in senile tissues was of great interest.

DR. J. F. MCCONE reported a case of a "Scirrhus Carcinoma Occurring in a Cicatrix," with specimen, sections, and photographs.

DR. H. KREUTZMANN: This case is certainly interesting, in fact, unique. I have in mind now a paper by Sänger on a report of a case or cases of neoplasms in the scars from abdominal operations. A question would arise as to whether or not the genital organs were diseased at the time of the operation.

DR. MCCONE: The case reported by Sänger I think was of an endothelioma following a laparotomy. It was not particularly malignant.

DR D. W. MONTGOMERY: This is important on account of the comparative frequency of keloids in scars, and the transition from keloid to sarcoma. The sections prepared and stained by Mr. Bruguiere are beautiful, and show a perfectly absolute cuboidal cell of carcinoma. The question is, Where did it arise? Not in the skin, for it would be of flat epithelium; not in the sebaceous or sweat glands, that is too rare. The skin was quite movable, and cancer cannot arise from connective tissue, and it is not an endothelioma. The uterus presented no discharge and no uterine cavity. It was simply a string from the abdominal wall to the internal os. There were two nodules, fairly old, at the top of the uterus. It no doubt sprang from unused epithelial cells in the fundus of the uterus, extending over to the scar and causing death by metastasis.

DR. H. KREUTZMANN read a paper entitled "A Cystic Mole and Double Ovarian Tumor in same Patient."

DR. C. A. VON HOFFMAN: A patient can become pregnant if there remains a bit of ovarian tissue, even if cystic disease exists. Cystic moles are quite dangerous; I have had four cases, three of which died. They died always after the mole was expelled, explained by the weakness of the heart muscles, etc. The diagnosis of this condition, cystic mole is not difficult.

DR. KREUTZMANN: On the second examination we discussed the possibility of a cystic mole. As to cystic moles being dangerous, I do not agree with Dr. von Hoffman. I have seen a large number and do not consider them very dangerous. Lately I have seen a cystic mole and deciduoma malignum following a cystic mole. I have seen many have cystic moles removed, and the patient become pregnant afterwards.

DR. D. W. MONTGOMERY: A long time ago Bachmann described a case of hydatid mole becoming malignant. It grew in the uterine wall. It is the only case, I believe, recorded, and is mentioned in Playfair's Midwifery. It is interesting now that a deciduoma comes before us following a cystic mole.

Aneurismal Varix.—DR. W. WATT KERR exhibited a case of aneurismal varix, which he reported briefly as follows: He said: Seven years ago the patient received a knife wound in the neck. He bled profusely, and rode seven miles in a hack before it was attended to. Four years ago he came under the speaker's care with a very rapid heart. After getting better he left and returned to the hospital six months ago. The heart was very rapid. The pulse could not be counted at the wrist. Digitalis had no effect upon the pulse. Twenty grains of bromide of potassium brought the pulse down to 80 within 24 hours. The heart always troubles him; mostly when he is excited or drinks. Each distinct attack of tachycardia that he has had, and come to the hospital to be treated for, has yielded to the bromides. There was also a contraction of the left pupil.

DR. G. E. CAGLIERI spoke of a case of unequal pupils in a boy whom he treated once a month for chronic headache, in which the right pupil dilated. Drugs had no effect upon the pupil.

DR. LEO NEWMARK: Inequality of the pupils does not show any particular lesion, and has not such insignificance as some put upon it. This case has a narrowing of the palpebral fissure also, and looks much as if the right pupil were dilated.

DR. J. F. MCCONE mentioned the case of a woman suffering for 20 years with a severe headache and inequality of the pupil. There seemed to be a congestion, the ear was reddened, etc. Nitroglycerine made her worse, but 1 to 3 grains of extract of ergot stopped the headaches, and now keeps them under control. French authors advise ergot in headaches. There was no visual change. The condition closely resembled Claude Bernard's experiment of cutting the sympathetic.

DR. NEWMARK: It is not so easy to diagnose between the paralytic and spastic types of headaches.

DR. CAGLIERI: I have seen methyl blue used in the spastic variety and in angina pectoris.

DR. G. GROSS had tried methyl blue in sciatica with benefit; the patient claiming that when he passed his urine he was relieved.

SAN FRANCISCO SOCIETY OF EYE, EAR, NOSE, AND THROAT SURGEONS.

Regular Meeting, January 21, 1897.

The President, W. F. SOUTHARD, M.D., in the Chair.

Election of Officers.—The following were duly elected officers for the ensuing year:

President	W. E. HOPKINS.
First Vice-President	G. E. BRINCKERHOFF.
Second Vice-President	ROSAMOND A. COX.
Secretary	GEO. W. MERRITT.
Treasurer	K. PISCHL.

New Members.—T. REDMOND PAYNE, M.D., and A. B. MCKEE, M.D., were duly elected members of the Society.

The Sideroscope and the Large Electro-magnet.—DR. A. BARKAN demonstrated the use of the Sideroscope constructed by Dr. Asmus. This instrument consists of a finely poised sensitive magnetic needle, which indicates, by its deflections, which are observed across the room by a terrestrial telescope whether or not a suspected particle of iron or steel is in the eye under examination. The eye being closely approached to one or the other pole of the magnetic needle, and the variation of the needle noted. The apparatus is ingenious and effective, and sure to be of good service in ophthalmic practice. The electro-magnet of Prof. Haab, of Zurich, was also demonstrated. It is a very powerful apparatus, connected directly with the street current. The instrument is so effective that when a small particle of iron or steel has been inserted into the vitreous of a hog's eye, which is then approached to the end of the electro-magnet, within about one inch, the foreign body is powerfully drawn forward into the anterior chamber, traveling always around and not through the lens, and can be easily removed by a single corneal incision, unless it passes out of the eye through the same opening through which it entered. Several experiments illustrating these facts were shown. The first case on which the instrument was used by the speaker, is still under treatment, and will be reported in full later on.

Dr. A. H. Voorhies said that in all the cases which had come under his care, having iron or steel in the vitreous, the eye had to be enucleated notwithstanding that the steel had been successfully removed. The eyes were enucleated because sympathetic inflammation followed after a a few months or a year.

Dr. Barkan said that in several of his cases, the eye had remained good after the steel had been extracted.

Dr. A. B. McKee said that in the cases that he had seen operated on for steel in the vitreous, the eyes were enucleated soon after the magnet was used.

Dr. G. W. Merritt said he had seen a case, recently, in London, where the surgeon, after trying to extract the steel with a magnet, from the vitreous, had to enucleate the eye on account of the traumatism produced by the use of the magnet.

SPECIAL CORRESPONDENCE.

GERMANY.

[FROM OUR OWN CORRESPONDENT.]

Professor Esmarch and Her Highness the Princess of Holstein.—Serum Diagnosis of Typhoid Fever.—The Revival of Phlebotomy.—Physician and Tradesman.—Unwarranted Accusations against the Profession.—Untoward Effects of Quackery.—A Scandal at Wörishofen.—Death of Professor Du Bois-Reymond.

Last Saturday the Nestor of German Surgeons, Frederick von Esmarch, celebrated with due festivities, at Kiel, the twenty-fifth anniversary of his marriage with Her Highness the Princess Henrietta of Schleswig Holstein. By this marriage the Professor has become connected with the reigning dynasty, Mrs. Esmarch being an aunt of the present Empress, who is also, by birth, a Holstein princess. Esmarch's name is, however, by itself too well known to need furbishing up by any such helps. His method of bloodless operations, his practical work on the surgery of warfare, and a number of other valuable contributions to science, had made him justly famous even without this his second marriage. By his first marriage, possibly, he had profited more for his career than by the later one, for the father of his deceased wife was a surgeon of great talent and renown in his day, Dr. Strohmeier, of Hanover. One of his sons is Professor Edwin Esmarch, of Königsberg. Of course, the occasion of the silver wedding received full attention from all persons, from the Emperor down, in any way connected with the illustrious pair, and the whole town was *en fête* that day.

A subject which has been engaging much attention lately is the diagnosis of typhoid fever in its early stages by means of the action of the patient's serum on cultures of the bacillus, as originally suggested by Widal and practically applied by Gruber. Interesting demonstrations were given at recent meetings of the medical societies of Berlin and Hamburg, as also elsewhere. The *technique* consists of a microscopical and a macroscopical part, and may be briefly described as follows: Under observance of the necessary precautions to insure freedom of contamination with heterogeneous germs, a little blood is taken from the finger tip of the patient, and a drop of serum derived therefrom is added to about 10 drops of a meat broth culture of typhoid bacilli, which must not be older than one or two days. The preparation is then placed as a suspended drop under the microscope, and in the course of some thirty minutes to a few hours, it will be found that the bacilli, which otherwise are remarkable for the liveliness of their movements, have all collected into motionless little heaps, leaving the interstices almost quite free, that is, if the patient is really suffering from an attack of typhoid fever. The second part of the test is generally considered even more conclusive and consists of mixing 10 drops of serum derived from blood taken from the median vein of the patient, with 10 cubic centimeters of the culture as above, and preserving this for 24 hours at body heat. If, at the expiration of this time, the culture, which originally was turbid, has become clear, the bacilli having collected with the sediment at the bottom of the test tube, the diagnosis of typhoid is assured Later on, however, be it remembered, in the course of three or four days, the broth again becomes thick, even in cases with undoubted clinical symptoms, and in the course of reconvalescence it is interesting to note, the blood gradually loses this immobilizing or agglutinizing power over the bacilli. The whole procedure is easily carried out in any properly equipped laboratory, and may be considered fairly reliable, although mishaps will occasionally occur. At any rate, the process marks an interesting advance in the engrossing and highly instructive department of etiological diagnosis.

As a reversal, the ancient operation of phlebotomy is evidently again coming into favor, after having been as good as utterly discarded for about a generation or more. During my student days, some ten or fifteen years ago, the only operation of this kind that I remember having witnessed was performed for the purpose of transfusion, in Thiersch's clinic, at Leipzic. Of late, several reports in favor of this remedy have appeared from time to time. Especially in cases of chlorosis the repeated abstraction of small quantities of blood is described as producing a most beneficial effect In other respects, the following case described by Dr. Steinhardt would also go to show that we may do well to bear in mind the teachings of our medical forefathers, with their extensive practical experience: A married woman, aged 26, was brought to the doctor, in great distress with intense cyanosis, dyspnea, spasmodic cough, and so weak that she had to be supported by three men in order to reach the consulting room. On examination, swelling of various joints, pronounced edema of the legs and thighs, all the characteristic signs of stenosis and insufficiency of the mitral valve, diffuse moist rales over both lobes of the lungs, and, in short, clear signs of the utmost danger to life were found. Seeing that the internal or the subcutaneous administration of drugs could offer no prospect of relief, venesection was resorted to, and about 10 or 11 ounces of blood were removed. Improvement was apparent even before the operation was completed, and half an hour after, the patient was able to leave the house resting herself but lightly on her husband's arm. As the amelioration has persisted since then, a period of four months, it must be conceded that among all our therapeutic resources it will be difficult to point to anything more effective.

A lively agitation has been set on foot, especially by the efforts of Professor von Bergmann, to rescind the laws which classify medical men as regards taxes and certain other things amongst the trades people. In the year 1873, a reforming bill was passed, which gave practitioners the liberty to choose their domicile at their own free will, abolished compulsion in the rendering of medical services, and in a few other points, marked a very acceptable advance. At the same time the practice of the healing art was made open to every one who might choose to attempt the treatment of his fellow men, but, by law, the duly qualified practitioner only has the right to call himself a physician (*arzt*) and is exempted from paying a fee for his license to practice (*Gewerbesteuer*). Of late, the authorities have, however, decreed that all practitioners, qualified or not, who carry on their calling in a clinic of their own, are liable to this tax, as the object of such an institution must needs be considered as based on a clearly pecuniary interest. The Professor, on the other hand, contends that at least the fees paid for medical attendance should be exempted from the tax, and that in most or many cases the medical honorarium, which by law is tax-free, is really the only profit derived from these institutions. In this respect he will undoubtedly receive the cordial support of all his professional brethren placed in a similar position as regards private hospitals, and possibly the movement will eventually prove successful, for at present a somewhat more favorable wind has opened up in governmental quarters anent medical men, although very peculiar notions seem still rampant in parts where one would hardly expect them.

Thus, in the Prussian Landtag in the debate on the budget, Dr. Lenzmann, a barrister at law, virulently attacked the administration of our lunatic asylums *en masse*, and Mr. Stadthagen, also originally a lawyer, deliberately asserted that one-half of the patients detained in the retreats were in reality sane, or else they had at least been sane on admission, and had been turned crazy by the treatment they underwent and the shocking sights they saw. Of course, all this is sheer nonsense, but this is, in spite of all enlightment, an age of gullibility and superstition. The public mind, as exhibited in the daily papers, is one day full of enthusiasm over some new medical discovery, some wonderful drug perhaps, or some daring operation, and then medical science is extolled to the skies. The next day the same organ trumpets the praises of the miraculous cures wrought by an illiterate shepherd, or any other quack, furniture dealer, tailor, priest, shipwrecked attorney, or other like ilk. And, sad to say, people who ought to know better, are as easily deceived as the so-called lower classes. Quite recently such a pow-wow man, the possessor of a sanatorium in Dresden, had the honor of curing unsuccessfully (*sit venia verbo*) a personal aide-de-camp of the Emperor—General-Major von Lippe. He had before been treated by Professor Ewald, at the Augusta Hospital at Berlin, and was suffering from a nervous disorder, the exact nature of which had been kept private, but which according to the explicitly expressed opinion of the Professor and of other eminent physicians called in consultation, afforded but a very unfavorable prognosis. On this fact being made known to the family, the astounding request was proffered that a consultation should be held with a certain quack, whose name is not worth mentioning, but whose faculties are such that he diagnoses diseases by smelling the patient's socks. Although naturally declining to have anything to do with such a swindler, the doctor, influenced, it is insinuated by pressure from high quarters, permitted the patient to remain at the hospital under this man's care until he was thought well enough to travel from Berlin to Dresden for further treatment at the *Naturheilanstalt*. A little while ago a report was circulated that Herr von Lippe was in a worse state than ever, and that a regular physician had to be called in. Thereupon a distinct denial was promptly published by the family, but the vaunted wonderful improvement eventually has now resulted in the death of the patient, and all lying is now in vain.

At Wörishofen, too, the *beau ideal* of unscientific doctoring, things have proved to be not what they seem. A visitor there, a physician writing to a Munich paper a little while ago, described the hygiene of the large new hospital founded by Pfarrer Kneipp and his friends, as far from satisfactory, as also the actual state of the patients, and the recent epidemic of typhoid fever there quite corroborates his report. Furthermore, a very peculiar light was thrown on the manner things are conducted there by proceedings just now concluded in the law courts, a male attendant being charged with having used violence to a nymphomaniac girl, placed as a patient in the hospital. It was proved on evidence that the man had been entrusted with the attendance on this girl for some eight or nine nights, being quite alone with her in the room during this time, a thing which in itself would appeal to the most confiding mind, clerical, medical, or otherwise, as highly improper, to say the least. The unhappy girl was later on removed to a lunatic asylum, where she eventually gave birth to a child. Although the verdict resulted in favor of the defendant, the administration of Wörishofen thus appears in no very enviable or commendable position.

Sincere regret has universally been felt at the death of Professor Emil DuBois-Reymond, the celebrated professor of physiology of Berlin, who has done so much to advance our knowledge especially regarding the action of electricity in the animal organism, his chief work being the well-known volume "Researches on Animal Electricity." Although of Franco-Swiss extraction he was a thorough German patriot, quite as ardent, one may say, in his feelings for the German Empire as Louis Pasteur was in his devotion to France. His life has been one uninterrupted chain of successful labors. After a brief period devoted to the study of theology by the wish of his parents, he soon turned to natural science, for which he was preëminently well qualified. It has been said of him, and, no doubt, with all justice, that he "probably never made an incorrect observation or performed a faulty experiment." It was a result of such exactness and reliability in his researches that he was able to utter the famous "Ignorabisnus" concerning certain final issues, an utterance that gave rise to so much comment a few years ago.

It appears somewhat difficult to find a successor in his place for the chair of physiology thus left vacant. Wilhelm Kühne, of Heidelberg, the discoverer of the action of the perceptive red color of the retina, was offered the post, but he declined it, evidently preferring the beautiful Neckar valley, and his present cherished laboratory, built exactly according to his own designs and wishes, to the distractions of the metropolis. At present negotiations are in progress with Professor von Kries, of Freiberg, and it is believed he will be inclined to accept the appointment.

MARCH 6, 1897.

REVIEWS AND NOTICES.

AUTOSCOPY OF THE LARYNX AND THE TRACHEA. (Direct examination without mirror.) By Alfred Kirstein, M.D., Berlin. Authorized translation (altered, enlarged, and revised by the author) by Max Thorner, A.M., M.D., Cincinnati, O., Professor of Clinical Laryngology and Otology, Cincinnati College of Medicine and Surgery; Laryngologist and Aurist, Cincinnati Hospital, etc. With twelve illustrations. Philadelphia: The F. A. Davis Co. pp. xi.–68. Price, cloth, 75c.

This little book describes an original and novel method of direct examination of the larynx and the practical application of the method in the treatment of laryngeal affections. If the author's instrument can be generally applied, it will, of course, be of immense advantage in laryngeal and tracheal operations. The author states that fitness for autoscopic examination varies with each individual. To determine this empirically requires a willing assistance on the part of the patient, which can easily be obtained in the vast majority of cases. He finds that in about one-fourth of all adults the whole larynx and the whole trachea can be conveniently examined autoscopically, and about one-half of all people can be fairly well examined with the autoscope, so that the posterior region of the larynx, including, sometimes, a more or less extensive portion of the trachea, is exposed to view. As a description of the instrument and method of use cannot be given here, those interested in laryngeal work are referred to the book for a full explanation of the *technique*, and the advantages and disadvantages of the discovery.

MEDICAL NEWS.

LICENTIATES OF THE BOARD OF EXAMINERS.

At a meeting of the Board of Examiners, held March 2, 1897, the following were granted certificates to practise medicine in this State:

Amanda Congdon Amsden, Pasadena; Med. Dept. Univ. Buffalo, N. Y., May 3,'92.
Albert H. Brundage, Brooklyn, N. Y.; Med. Dept. Univ. City of N. Y., Mar. 10,'85.
Wm. Parker Burnham, Sacramento; Med Dept. Univ. of Cal., May 13,'96.
Ira E. Coe. Porterville; Jefferson Med. Coll., Pa., Mar 9,'67.
L. LeRoy Doty, Santa Monica; Med Dept Univ. Mich., Mar. 26,'73.
Geo. T. Dutcher, Monrovia; Coll. Phys. and Surg., N. Y., June 13,'94.
Gilbert Fuller Graham, San Francisco; Cooper Med Coll., Cal., Dec. 5,'95.
John W. Harpster, Florin; Rush Med. Coll., Ill., Mar. 31,'91.
Bernard Levenberg, San Francisco; Faculty Med., Paris, France, Sept. 4,'94.; Univ. Louvain. Belgium, Oct 9,'94; Coll Phys. and Surg., Quebec. Canada, Sept. 26,'94.
H. S. McGavren, San Diego; Omaha Med. Coll., Neb., Mar. 24,'87.
M. A. Nelms, San Francisco; Cooper Med. Coll., Cal., Dec. 7,'93.
John S. Parson (lieu certificate), Ashland, Or.; Jefferson Med. Coll., Pa., Mar. 8,'73.
G. W. Shores, Santa Rosa; Louisville Med. Coll., Ky., Feb. 25,'86.
L. T. Waggoner, Otterville, Ill.; Mo. Med. Coll., Mo., Mar. 5,'89.
Geo. W. Williamson, San Francisco; Univ. Kansas City Med. Dept., Mo., Mar. 2,'82.

CHAS. C. WADSWORTH, Secretary.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the U. S. Army (Division of the Pacific) from February 20, 1897, to March 20, 1897.

Leave of absence for one month is granted Major Curtis E. Munn, Surgeon, Benicia Barracks, California.

Official List of Changes of Stations and Duties of Medical Officers of the U. S. Marine Hospital Service (District of the Pacific) from February 20 to March 20, 1897.

Assistant Surgeons C. H. Gardner and Rupert Blue commissioned as Past Assistant Surgeons.

ITEMS.

The Columbus Medical Journal has removed from 150 East Broad street to its new quarters, 68 Butler avenue, Columbus, Ohio.

The College of Physicians and Surgeons, of Chicago, has recently become the Medical School of the University of Illinois.

The Medical Buckeye Flyer.—Arrangements have been made for a special train which will be known as the "Medical Buckeye Flyer," which will be made up of Pullman Palace Cars for the accommodation of those who cannot conveniently reach the *Journal* Special on account of circumstances or the locality in which they live. This train will go *via* Columbus, Ohio, where it will be joined by many of the Military Surgeons, who hold their annual meeting in that city prior to the meeting of the American Medical Association. It will be a through train, without change of cars to Philadelphia, over a route both picturesque and historic. Reduced rates will be made and the best of accomodations provided, care being taken in regard to the comfort of passenger in avoiding overcrowding of cars. Stop over privileges at Washington have been arranged for without extra charge. Those desiring to take this train will please write to R. Harvey Reed, of Columbus, Ohio, for further information.